AN INTELLECTUAL HISTORY OF MODERN CITY PLANNING THEORY

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Ph. D

UNIVERSITY OF EDINBURGH

1986

UNIVERSITY OF EDINBURGH

ABSTRACT OF THESIS (Regulation 7.9)

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Address .....

Degree Ph.D. *Date* April 1986

Title of Thesis An Intellectual History of Modern City Planning Theory

No. of words in the main text of Thesis .....

City Planning is an activity that seeks through conscious and selective intervention to bring about desired changes in an equitable and just manner. Its theoretical roots represent an amalgam of varied ideas and ideals, that have over time influenced and directed city planning activity. This study addresses three important questions, namely; 1) what constitutes city planning knowledge, 2) what are its basic premises and 3) how can planning knowledge guide planning practice. The thesis maintains that it is necessary to understand the intellectual roots of the dominant paradigms, to effectively assess the present and the future direction of city planning knowledge and practice. The protological questions that determine the nature of planning discourse, are grounded in the belief that man acts rationally and for a purpose. The rational behaviour of man and planners' avowed purpose of seeking the majority good through the best course of action are basic guiding principles. The results of these beliefs have at best been restrictive and at worst detrimental to the proper pursuit of planning. Our realization, albeit, belated, that the city is both complex and in a constant state of change, has challenged many of these beliefs.

The thesis attempts to seek out knowledge from both the western and eastern intellectual thought, in the hope of gaining a better understanding of the principles that could guide our actions in making the city more habitable. It is divided into six chapters. The Introductory Chapter sets out the protological questions that need to be understood and the parameters that define planning discourse. It presents an overview of planning activity in historical context. Chapter II examines the intellectual antecedents and the different paradigms that have influenced planning thought. It concentrates on the role of reason and scientific method and their exclusive and persistent domination of planning theory and practice. The influences of the age of enlightenment and the subsequent explosion in intellectual thought, that ranged from attempts to develop a science of society, to postulating a utilitarian guide to action are examined. The third Chapter provides a critical examination of the important contemporary planning theories. These theories are discussed as subscribing essentially to the technical rational paradigm and leading toward more humanistic theories in planning: theories such as social reconstruction, social practice and epistemological anarchism. Chapter IV discusses the application of theories to the practice of planning, some significant examples and critique of their successes or failures. The nature of conflicts and contradictions inherent in city planning are discussed in Chapter V. The final Chapter is concluding chapter -- it contends that the failure to recognize and understand the uniqueness of city planning problems, and the forced attempts at moulding urban issues into scientific terms in search for perfect or optimum solutions, have exacerbated and misdirected planning activity. It argues for a new paradigm to guide planning thought and practice -- a paradigm that is consistent with the moral and social realities of city living.
A Glossary of Terms, bibliography and some significant readings in planning theory are appended.

CONTENTS

ACKNOWLEDGEMENT

It is the culmination of many years of learning and teaching planning theory that this thesis represents. Many ideas have surfaced and many have died in the process. I have learned a lot from the students I had the privilege of teaching, from the great books I had the privilege of reading and from my peers with whom my many disscussions led me to probe deeper into the puzzles of what planning is, and ought to be.

To rethink anew I was inspired by three young ladies "C.N.& M.". "C" by her silent inspiration, "N" by her prodigious 'what' and "M" by her persistent 'whys' - this work is dedicated to Celina, Natasha and Maya. Much that this thesis encompasses that is good, I have learned from others, that which is in error is mine to acknowledge. Many have of course inspired me, many have confused me and many have shown me the way, but none so much as my parents, who always admonished me that the way to wisdom (ginyan) was in experience and not in books alone. This thesis is humbly dedicated in memory of my Mother and my Father.

Special thanks are due to my advisors in Edinburgh University, Professor Percy Johnson-Marshall and Prof. Rich-

ard Bigwood, who preservered with me in this task that at times seemed never ending and at times a lost cause. I am indebted in particular to Prof. Brian Elliott of Edinburgh University for his sage advice and insightful comments.

Very special thanks are due to Mrs. Muriel Innes who persisted inspite of the odds of time, idiosyncracies of the author and the confusion and multiplicity of drafts, in typing this thesis to its completion. To Dr.John Page, Mr. Don Falconer and Mr. Harry Nolan, I owe very special thanks for their advice and valuable insights. To Ms Irmie Wiebe for her help and encouragement in the long pursuit of this thesis. I am most grateful to Dr. Michael Feld for his very constructive criticisms and suggestions. My colleagues in the Department of City Planning, University of Manitoba, for putting up with a member of the staff who always seemed to be confused and perpetually in disarray. To all of them my sincere thanks. I am grateful to the Canada Council Doctoral Fellowship, which afforded me the time to study in Edinburgh University.

M.E.C.

Winnipeg, April, 1986.

PREFACE

This thesis is about city planning theory. It is about the ideas and ideals that have influenced planning theory and planning practice. The thesis is exploratory in nature and is an attempt at understanding some of the dominant paradigms that have over the years mandated planning thought and directed planning activity in the Western industrial societies. It focusses in particular on the period from the Renaissance to mid 1970s' coinciding approximately with two United Nations Conferences. The UN Stockholm Conference (1972), that for the first time raised international awareness to the plight of human environment and its impact on the planet earth; and the UN Conference on Human Settlements in Vancouver (1976), that called for global efforts, in planning human settlements to improve standards of living of the people, and for a more equitable distribution of wealth.

This particular period is significant in city planning discourse. It represents the most productive years in the development of planning thought and practice. It was a period that gave birth to grand utopian visions of cities, industrial towns, new capitals, rebuilding of cities to new

ideologies, development of new towns, suburban development and urban renewal. Intellectual discourse ranged from theories of city beautiful, to city efficient and practical, to quest for greater rationality in the distribution of resources, to advocacy and equity planning. It saw the emergence of planning as a distinct discipline, institutionalized and recognized as an instrument of change and social action, culminating in the two international efforts to seek solutions to improve the living conditions of the people in urban and rural areas.

The intellectual antecedents and the protological questions in planning are explored with a view to clarifying the inherent dilemmas, conflicts and contradictions that city planning is increasingly experiencing. At the outset it must be assumed, that the generic nature of city planning implies an interdisciplinary activity, concerned with description, prediction and control. This interdisciplinary construct raises the question of autonomy of knowledge unique to planning. The synoptic perspective, comprehensiveness, and the generalism that planning claims as the nature of its unique corpus of knowledge is often questioned, since it too suffers both, a lack of unity of thought and a clear definition or direction, of what planning is or ought to be.

What needs to be recognized and critically examined, are not the myriads of descriptive methodologies that domi-

nate planning thought but rather the normative constructs that constitute essential preconditions to effective planning, and indeed, its critical paradigm.

Every historical era, according to Mumford, is dominated by what he calls a "dominant theme" and an "emergent theme". This seems to be the case as well, in planning. The domination of planning thought by positivism, technology, growth and development, is gradually being replaced by an emergent theme whose nature and purposes appear - at the present time at least, antithetical to planning, particularly if viewed in its historical context. But these emerging directions in planning are critical and urgently needed.

Planning thought has evolved over the last century, more in response to the crisis of the time, than to any specific pursuit of a grand vision. It preoccupied itself to removing the evil while disregarding any purposeful good. The emergent theme, mentioned earlier, calls for recognition of new consciousness, ecological awareness and qualitative concepts, a process of sharing and participating, a de-emphasis of materialism and the dogmatic teachings of Reason and Enlightenment, with its over-adherence to the forces of science and technology. This opens new possibilities to address the ever increasing contradictions and conflicts that seem so endemic, particularly to the urban milieu, and that have been the principal hurdle that presented the greatest challenge to planning. In essence there is a need to free

ones thought process from preconceived categories, from the perennial search for universalities, causal relationships, reasons and justifications, and move forward a search for relevance, meaning and purpose, where planning in the end will be judged by the successes or failures of its results, rather than by its pure adherence to logical processes.

It can be argued that planning needs to always take account of its past performance and precedences and recognize its evolving role by participating actively in the change process, not only through physical, technical and material improvement, but also through the pursuit of qualitative ends.

It is not the moralistic ideologies or self-righteousness that is required to deal with the ever increasing conflicts and contradictions that attend social progress, but the accepting, recognizing, understanding, and managing of the inevitable conflicts and complexities that contemporary pluralistic societies generate in the process of change, and growth. D. H. Lawrence noted that neither creation nor universe depend on man for its survival, a point worth recognizing.

The burden of choice has now increased both in quantity and complexity. The radical solutions of the 50's and 60's so vehemently pursued in grandiose master plans, giant motorways and huge urban and suburban malls are no longer

desirable or feasible. The pressures from society are now pressing hard and demanding the resolution of the ills that represent the urban living. What in the end matters is not some ephemeral truth, but what people believe about things that affect their lives.

> "In things human it is not what exists or what happens or what is done that counts, but what is believed about them; in other words, their myth, their personification."[1]

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[1] Bernard Berenson, Aesthetics and History. New York: Doubleday & Co., Inc., 1948. p. 232.

Chapter I

INTRODUCTION

"....two worlds, one dead, the other powerless to be born."

Mathew Arnold.

The purpose of history according to Voltaire is neither to satisfy human curiosity nor to accumulate facts about the past, but to search for ideals useful for planning the future.

The history of city planning thought, is not dissimilar to many other disciplines particularly the social sciences, inasmuch as it has also experienced and is experiencing varied phases in its development. These developments have been influenced by a multiplicity of often competing schools of thought, a few of which like the "comprehensive planning theory" have even dominated the entire spectrum of planning activity at various sporadic times since the beginning of the twentieth century.

These varied schools of thought emerged primarily due to lack of any coherent paradigm or a generally accepted view of the phenomena of what planning is or what its pur-

poses are. Any attempts at definitions tended to be tautological, for example planning has been defined as "planning is what planning does". Lack of focus, extreme vagueness and over-extension of its domain of inquiry resulted in the accusation often made that "If Planning is Everything Maybe it's Nothing"[1] or it's corollary "If Planning isn't Everything Maybe it's Something"[2] This dilemma is of long standing and has its roots in the dialectic between theory and practice. If planning is a practice-based expertise, it can be argued that any judgement as to its legitimacy of necessity has to be suspended; but if it seeks its roots in theory, then its intellectual antecedents need to be well understood and reasons well formulated.

Planning is an activity that is inherent to man. In generic terms, the word "planning" is defined as a scheme, a method or a process designed to achieve desired ends. It is rational thought applied to action. The term "city planning"[3] however presents a plethora of definitions. These definitions range from the traditional physical land-use planning, which was defined as an orderly and efficient de-

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[1] A. Wildawsky, "If Planning is Everything, Maybe it's Nothing". Policy Sciences, Vol 4, No. 2, Summer 1973. pp. 127-153.

[2] E. Alexander, "If Planning isn't Everything, Maybe it's Something". Town Planning Review, Vol. 52, No. 2, April 1981. pp 131-142.

[3] A more appropriate term would be "Geotechnic", a word first drawn to our attention by Patrick Geddes, and is defined in the Webster's Third International Dictionary, as a science of making the earth more habitable.

velopment of urban environment, to reconstructing and re-educating society through intervention and or innovation, or even planning as being simply a liberating mechanism. These theories emerged essentially as a result of social, economic and political circumstances, prevailing at various places and times in the history of city planning thought. They have been products of a fiat, of intellectual inquiry in the production of planning knowledge, a concensus reached through public debate and/or practical exigencies. They have been attempts that ranged from self aggrandizement, to domination and control, to maximizing the elusive public good in an equitable and just manner, to safeguarding individual freedom, to expanding choices and opportunities or even aesthetically to create beautiful and ideal living environments. But underlying all these quests, has been the belief in the rationality of man, and its supremacy over man and nature. Rational action implied rational and just distribution of the commodity called "happiness".

City Planning theory has been at the locus of this ongoing discourse. In its formative years planning theory sought refuge in the technical rationality and search for ideal solutions. In its subsequent development, it questioned its epistemological roots in trying to reconcile the what "is" planning, to what planning "ought" to be. It attempted to legitimize its actions through seeking concensus, through posturing public interest and through public partic-

ipation. Today city planning theory is trying to understand the fundamental moral principles that dictate and guide planning actions, that is, it is trying to search for a theory of action, that can fuse the world of facts with the world of values.

This thesis is an attempt at examining three important questions that circumscribe city planning theory and practice. They are 1) what constitutes city planning beliefs and knowledge, and how are they organized; 2) what are its basic premises and 3) how can planning knowledge guide planning action. These questions have no doubt been addressed by others, most notably by Friedmann (1971), Jantsch (1975) and Churchman (1978). This study seeks to elucidate the intellectual roots, the various ideas and ideals that moulded city planning thought over the years, and that have in turn affected the practical discipline of city planning.

The contention of this thesis is that planning is, in essence, an ethical question of judgement that needs to be understood in its theoretical formulations, but not devoid of its practical implications. The objective of this thesis is to seek ideas and ideals from the past to guide the future, by examining the different paradigms that permeated planning activity and to suggest some new directions that planning ought to seek in its quest for creating a better living environment.

One of the most serious dilemma, however, that planning faces is the inadequacy of the dialectics to address the critical question of the link between theory and practice of planning. It has been an ongoing debate among academics and professionals, whether theory should be devoid of practice or whether in fact practice should inform theory. If theory is an abstraction of reality and helps its understanding, then of necessity practice must inform theory. The problem however is that reality, particularly urban reality is not susceptible to theories which are essentially scientific in nature. The critical question therefore is whether scientific theories are amenable to social problems particularly because the laboratory of planning activities cannot be subjected to all the canons of scientific rationality or experimentation, a must in any respectable inquiry and a must if it is to be endowed with the mantle of credibility.

According to the strict scientific cannons, all laboratory procedures must be able to be isolated, controlled and be reproducible within the strict dictums of objectivity. Such a rigid constriction imposes grave limitations on planning activity and in fact distorts its real purposes, which are more than mere problem solving or efficiency and order. Planning is or ought to be equity, justice, freedom, choice, purpose and action; it is a guide to their realization. Whatever the analogy to the biotic world may be,

planning is not an organism, it is a purposeful and ongoing activity of the human mind and belief.

Planning, unfortunately, having of necessity to contend with on the one hand with a high degree of abstraction, and on the other, a high degree of precision mandated by the scientific method, essentially lost its main "raison d' etre". In the process, planning inquiry generated out of necessity no doubt, a lingua of its own that is called "planning jargon" conjured or borrowed mostly from allied disciplines, and often applied out of context, or structural premises, and simply used for want of credibility and scientific acceptance. "Jargon" according to Suzanne Langer is "a special vocabulary for commonsense ideation". "Jargon" she says, "is language which is more technical than the idea it serves to express. In essence it is an artificial language that precludes any specific definition, but serves well for scientific respectability."[4]

It is often argued that jargon is necessary in order to establish the needed rules, vocabularies and procedures in keeping with strict scientific inquiry, and particularly in such interdisciplinary activities like city planning. The danger however, is in the inability of such jargon to translate the more subjective issues that affect human living and that are in the domain of common sense, feelings, and the

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[4] Susanne Langer, Mind: An Essay on Human Feeling. Vol. 1. Baltimore: The John Hopkins Press, 1967. p. 36.

world of "sentience", as it is often referred to, into pragmatic actions, and into significant results. It is the separation of thinking and feeling, of reason and intuition, of theory and practice, that lies at the root of this discord and uncertainty. Successful planning is not an activity that lies exclusively in the domain of rationality, but is an amalgam of both reason and intuition that produces insights, the most essential ingredient for planning.

In the long development of planning thought, what has emerged is neither a scientific discipline with its epistemological rigour, nor truth that it dogmatically pursued, but scores of descriptive, functional methodologies devoid of any sound theoretical foundations, save those uncritically borrowed from allied disciplines, generating in the process, what in essence amounts to, methodological ecclecticism. Ecclecticism that defines urban problems in terms of techniques available for their solutions.

Theories in planning emerged in response to either specific economic or social crisis or out of concern to amend the wrong in the interest of the public good. They intended at best to be remedial, highly constraining, couched heavily in the scientific idiom and always directed at causal concerns and the procedural aspects of planning activity. In the process, they failed to account for the substantive issues, they failed to reconcile the world of facts with the dictates of values and they failed to under-

stand the role of 'feelings', and the role of commonsense and intuition in the planning process. These were simply abdicated in favor of so-called scientific objectivity and truth; truth that was equated with good but was neither definable nor identifiable. It was a conflict between facts on the one hand and reconciliation with values on the other. This dichotomy between facts and values persisted throughout city plannings' long history. Likewise the dichotomy between ends and means caused a great many shifts in planning theory - some emphasizing ends and others means or both. City planning furthered its activity particularly in its early phases by simply ignoring one in favour of the other. It gained its legitimacy not by the profoundity of its theoretical formulations but by its historical circumstances, and by its mere "ingenui" for survival.

Most of the 20th., century planning theories born out of crises, related to public health and unsanitary conditions of the aftermath of the Industrial Revolution and persisted on the illusive promise of an Ideal City. This pursuit of an ideal took many forms. Historically they began with search for an Ideal Community and shifted to postulate Ideal Forms.[5]

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[5] Gordon E. Cherry, Town Planning in its Social Context. London: Leonard Hill, 1970. p. 9. See also Leonardo Benevelo, The Origins of Modern Town Planning. London: Routledge and Kegan Paul, 1967. Benevelo contends that the years 1830 to 1930 to be the significant period in the development of planning theories.

Although the two, namely the pursuit of Ideal Community and the Ideal Form, have developed interrelatedly, their basic philosophical premise differed markedly. They are both no doubt of long ancestry, originally sanctioned by both Plato and Aristotle in their triad of eternal values - the true, the good and the beautiful-reason, sentiment and sensibility.

These theories were sparked either by the religious zeal of the early thinkers, or by a vision of a new society. The former postulated a kind of theocratic society, governed by divine rule in pursuit of equality and common good for the good life of its citizens. It was a kind of ethico-religious utopia, amply enunciated, for example, by St. Augustine[6] in De Civitate Dei (413-426 AD.); St. Thomas Aquinas', De Regimine Principum (c.1267); and Girotamo Savonarola's, De Politia et Regno Trattato (c.1480) - a theocratic state in which charity and righteousness, liberty and equality would predominate and public interest will overrule private interests. Those that postulated a new vision of society conceived it as an autocratic society sanc-

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[6] St. Augustine contrasts the Civitas Dei with Civitas Terrem; the City of God with City of Men. The Civitas Dei is not to be equated with the church nor should Civitas Terrem be equated with the Government in the political sense. The distinction St. Augustine makes is between the organization of life and the morals or conduct of life. To him man lives either according to the rules of God or to the rules of man. The former he contends inevitably leads to Civitas Dei. It is also interesting to note that Beauty for St. Augustine was in 'Unum' the unity of nature and man in a harmonious relationship.

tioned by sacred rights, rigidly controlled and structured. It was to be brought about by change in the socio-political conditions. These were well enunciated in for example: Plato's The Republic (Politeia) (c.350 BC.), in search of a just society ruled by a philosopher king in moral precepts subsuming the individual for the good of the state; Aristotle's Politica (C.330 BC), the state as the highest form of community in pursuit of "endaimonia" human felicity; St. Thomas More's, Utopia (1516), a perfect communistic commonwealth, a state wherein equal social opportunities will exist through community of property and abolition of individual rights; Johann Valentin Andreae's Christianopolis (1619), emphasizing education and training of youth, the pursuit of equality peace and contempt of riches; Tommaso Campanellas's, Civitas Solis (1623) ruled by priest "Hobor Metaphysicus" as head of temporal and spiritual matters, assisted by "Power, Wisdom and Love", and in which all property is held in common as a means of securing social unity, a complete reconstruction of existing social institutions to achieve a just and progressive society; Francis Bacon's New Atlantis (1627), a land of freedom and justice, a new society based on knowledge and discovery, and Abbe Morelly's Code de la Natura (1755). Morelly who could well be considered the forerunner of Utopian Socialism, maintained that man's main end for existence was pleasure - man was by nature good and had moral rectitude, and that evil in society arose from secondary causes and could be eradicated through, for exam-

ple, abolishing the institution of private property. He sought a kind of social reconstruction using his basic principle "each is to labour according to his ability and share according to his needs".[7]

The second equally important movement in the Ideal City pursuits was the Ideal Form in which the Ideal City was equated with the Ideal Form. This Ideal Form was always moulded in geometric or some rigid mathematical rule. One of the earliest in this school of thought who postulated an ideal city form was Marcus Vitruvius Pollio (c100 B.C.) in his treatise De Architectura Libri Decem (c.27B.C.). In his treatise Vitruvius emphasized form and function as the main considerations in planning of cities.

The Renaissance however saw the fullest development of the Ideal Form by way of very elaborate geometric patterns, in works of men like; Leone Battista Alberti, (1404-1472), in De Re Aedificatoria (1450); Leonardo da Vinci, (1452-1519), the great Renaissance master, who portrayed the ideal city in geometric form in his ideal plan for the city of Florence.[8] Da Vinci even believed that painting was science and like science was subjected to mathematical laws; Antonio Filarete, in Trattato D'Architectura (1464); Vincenzo Scamozzi, in Idea dell'Architectura Universale

[7] See Morelly, Code de La Natura (1755) discussed in Guthrie, Socialism before the French Revolution.

[8] S. Giedion, Space Time and Architecture. Cambridge: Harvard University Press, 1954. pp. 42-54.

(1615); Francesco Giorgio (1439-1502) in Polygonal City (1490). As a result we see the emergence of star-shaped cities, polygonal and other geometric and gridiron patterns, as "citta ideale", based on either the needs dictacted by military exigencies or mere fancy of the designer.

The Eastern world interestingly perceived Ideal Cities as a synthesis of Ideal Communities and Ideal Form, the former, however, dictating the latter. Hindu literature, abounds in utopian thoughts that address the interrelationships between man and society, and man and nature, in seeking harmonious existence. The Ancient Sastras and Vidyas (c 600 B.C.) deal at length in physical, sociological, psychological, and metaphysical aspects, of daily living in rituals and in the sciences and art of human habitation. Two of the earliest Sastras of particular relevance to planning, are found, one in Hinduism and one in Buddhism. They both conceptualize the ideal city using ethical codes as determinants of ideal behaviour, and which in turn prescribed rigid geometric forms for ideal cities. The Bhagavad Gita (c 100 B.C.) which forms a part of the great epic Mahabharata is perhaps the oldest treatise in ethics, purported to have been written by the celebrated author Vyasa. The Gita derives its inspiration from the ancient Upanisads (c.800 BC), and attempts to integrate into a code of ethics, the struggle between the forces of good and evil, by emphasizing love and liberation of self through a new understanding of the

unity and meaning of humanism. The Questions of King Milinda (Menander) (c.400 B.C.), a Buddhist text, likewise deals in ethics and contains a chapter on "The City of Righteousness" which summarizes best the idealism of ancient Oriental sages, and goes as follows:

> "The Lord's City of Righteousness has virtue for its ramparts, fear of sin for its moat, knowledge for its gates, zeal for its turrets, faith for its pillars, concentration for its watchman, wisdom for its palaces. The Basket of Discourses is its marketplace, the Supplementary Doctrines its roads, the conduct its court of justice, and earned self-control is its main street..."[9]

In Islamic philosophy, we find similar references to ideal cities. Al Farabi (Abu-Nasr Muhammad, 873-950), a Muslim philosopher, whom some claim as ranking with Plato and Aristotle, wrote Al-Madinat-Al-Fadila, concerning the Model City ruled by a philosopher king. Philosophy he believed was the supreme intellectual activity and as such plays a very dominant role in the ideal city. The head 'Ra-Is' as the source of all authority, dictated the code, the practice and form of the ideal city.[10] It is interesting to note that in Sufi beliefs the architect is called "muhandis" the geometer who was also the planner of ideal city form.

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[9] The Questions of King Milinda (Menander) trans. T.W. Rhys Davids. New York: Dover Publications, 1969. (c 400B.C.). There are a number of ancient treatises dealing specifically in planning human habitations and architecture, and prescribing rigid geometric forms, such as Vastu-Sastras, Silpa-Sastras, Manasara and Mayamatam being the principal ones, all dating to circa 100 B.C to 500 A.D, and attributed to Goddess Visvakarma.

[10] See Al-Madina Al Fadila. Trans. as Der Musterstadt von Al Farabi, by Friedrich Dieterici. Leiden, 1895.

All these ideal commonwealths were products of latent realisation of dissatisfaction with the existing conditions, economic and political injustices. They were grounded in the belief that physical and social conditions including institutions, needed to be changed if an ideal community was to be attained, through social justice and freedom. Some saw the Community and Institutions as instruments of change and others saw Form as a means of achieving ideal living.

Of the more contemporary utopian experiments following the Industrial Revolution three different directions were pursued. First there were those who believed in historicism, meaning return to the good life, that the past the medieval city in particular, epitomized, and they sought to reintroduce those forms and beliefs. Second were the remedialists who sought ad hoc remedial solutions to the ills of the urban fabric, through purely technical rational solutions such as health and social legislation, and by introducing some drastic reforms in the field of public housing and sanitation to improve the conditions of city living. This movement generated a series of Public Health and Sanitation Acts and Housing and Planning Acts, which in turn became the percursors of many of the planning practices of today.[11] The third and one of the most influential groups, the

[11] The basis for the new planning legislation and the new awareness it generated came mainly from three Acts of legislations enacted earlier, in the U.K.; namely The Public Health Act of 1848 and 1875, the Public Utilities

radicals, envisioned new forms coupled with social reform to deal with the problem of rampant industrialization, population growth, inequalities and injustices in the social and economic conditions of the people. The movement was sparked by the French Revolution (1789-1815) which overthrew many of the old beliefs and introduced new values and ideas of civil liberty, equality and fraternity. Francois Noel Babeuf (1760-1797) a French Journalist also known as Gracchus, was the first "cause celebre" of the very influential movement called Socialism, and the egalitarian ideas of equal distribution of land and income and peoples fundamental right to live. This doctrine was central of latter Socialist thinkers, the Utopian Socialists. Babeuf also believed that a perfect state must emerge not only from equality of rights but also from equality of goods and service.

The Utopian Socialists, were not only idealizing a community but were equally concerned with the realization of these ideals in practice consistent of course with the prevailing nineteenth century utopian thought. Utopian Socialists were not only egalitarians but also believed in the goodness of nature and the environment and were sympathetic to it. This is evident in many of their ideal cities which

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Act of 1868, 1875 and 1890; and the Housing Act of 1890. The Housing Act of 1890 and the Town Planning Act of 1909 together, provided the framework for the eventual, related acts that controlled planning and development of land. These were the beginnings of planning legislation and legitimization of planning activity in U.K. and later in Canada. See Desmond Heap, An Outline of Planning Law. London: Sweet and Maxwell, 1973. pp.1-24.

were set in natural surroundings with parks and gardens. Of these later writings and experiments, we have Charles Fourier, the forerunner of Socialist thought who believed in the basic goodness of man, and in his Theories des Quartre Movements (1808), he argued for the removal of rivalries between the individual and clan interests, and suggested cooperation to bring about harmony. His "Phalanstere" or "Social Palace" gave ideal city a form in terms of zones and a Phalanx, a single building for living for all types of people and occupations. Robert Owen's A New View of Society (1817), with emphasis on universal education, the formation of character and the pursuit of happiness; Saint-Simon's Du Systeme Industriel (1821), who believed in inequality of men and used it as the very reason for social order, social religion and the principle of fraternity as a precondition for ideal society, a society in which the workers in the Industries, for example, assume positions of responsibility; Etienne Cabet, French Socialist and an ardent disciple of Robert Owen, in his book Voyage en Icarie (1840), outlined some strong taxation measures and land reforms for communal property; James Silk Buckingham published National Evils and Practical Remedies (1849), where he put forward an ideal community from which ignorance, vice and disease would be abolished; Benjamin Richardson proposed "Hygeia", the City of Health (1875); Tony Garnier in Une Cite Industrielle (1904), proposed creating an organic interrelationship between the various functions of the city, and was the first example of contemporary

town planning and one of the early attempts in utopian socialism. Although not designed for any specific site, the scheme was comprehensive and included many of the factors associated with city living including forms of government, cultural and educational aspects and residential and industrial needs of the city.[12]

Each of these tried to bring about social change essentially through physical disposition of buildings, strict codes of conduct and organizational structure. Each believed that either God or Nature mandated the happiness of mankind. Each of these also placed their ideal cities in rural environments but provided it with urban facilities and each also attempted to order the lives of its citizens in communal living to service the industrial productivity. Each also believed that by creating fit environments man could be led to perfection. They all believed in the abolishion of private property and they all saw education and some form of social religion as an essential component of social reconstruction.

These ideas were, in part, fueled by the great socialist movement, beginning with the writings of Marx and Engels (1848) and the belief that inequalities considered inevitable had in fact to be removed, and that a classless

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[12] L. Benevolo, The Origins of Modern Town Planning. Cambridge: The MIT Press, 1971. See also Joyce O. Hertzler. The History of Utopian Thought. New York: Cooper Square Publishers, 1965.

society was not only possible but inevitable. To realize the improvement of the economic and social conditions of the people, political intervention was not only necessary but was, in fact, possible.

The Worlds Columbian Exposition (1893) gave birth to the so called "City Beautiful Movement" in the U.S.A., that caught both the planners' and the public's imagination and raised great hopes of creating beautiful and orderly cities of grand vistas, coherence and efficiency. It was rooted in three ideas - the need for municipal art, civil improvement and landscape as part of urban fabric. The movement had considerable impact on planning both in the U.S.A. and Canada.

An attempt to fuse the remedial and the radical ideas came from Ebenezer Howard's Garden Cities of Tomorrow (1898). Influenced by Edward Bellamy's Looking Backward (1889), Howard's ideas arose from his concerns of the poor housing conditions of the working class and the different social reforms that were emerging. The concept was based on the belief that the human character could be changed by altering the conditions under which people lived and worked. Howard attempted to fuse the benefits of the city and the country in his Garden City ideal.

The year 1909 seems to be the decisive year for city planning. It was the beginning of "Comprehensive Planning".

In U.K., the first comprehensive Town Planning Act was enacted that called for more direct public intervention in the shaping of British towns and the first International Conference on Town Planning was held in London; in the U.S.A., the first National Conference on City Planning and the Problems of Congestion met in Washington, D.C. in 1909, and the National Housing Association was founded the same year. In Canada the Commission on Conservation Act was developed and enacted and in Germany and much of western Europe, it was the year that gave planning, recognition as a distinct profession. These forces collectively introduced a new ethic in planning not unlike those of Fabian Socialism.[13] They tried to replace free enterprise and private property rights, with public welfare, partially in response to the conditions of the time and partially as a result of the great disparities generated by the market system and its "laissez-faire" policies.

From about 1910, and as a result of the National Conference on City Planning, planning shifted its emphasis from pure aesthetic vision of the city, the physical design to a more utilitarian vision of efficiency and functionality

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[13] Fabian Socialism (1884) founded by Sidney Webb (1859-1947) was characterized by its concern for facts, facts that could describe the large forces inhibiting progress, and was an attempt at reforming the administrative and economic mechanism through "measurements and publicity". They sought to change society through persuasion but without revolution; and attracted many intellectuals to the movement such as H.G. Wells, G.B. Shaw, and Jawaharlal Nehru.

which gave birth to the "city efficient" and "city functional" movements. This was seen necessary as a means of controlling the wastes of unplanned and uncontrolled development by the different administrative authorities. Utilitarianism meant to maximize efficiency and thereby utility, and as a result technique and engineering dominated planning methods and the resultant product, the plans for the cities.

Planning nationally now encompassed a much larger sphere of concern and involvement. The government saw its responsibility not only to deal with the forces of depression, and to control unemployment, but as well to control and direct the overall economic activity and the social well being of the people. The formation of the Regional Planning Association of America (RPAA) in 1923, represents the first serious attempt of planning at regional scale of the city and its environment. It was a distinct break from planning's hereto preoccupation with city and its housing problem. The RPAA saw city planning on a broader scale as an integral part of its region necessary to achieve a more balanced distribution of population, resources and institutions. It was influenced by Raymond Unwin's Nothing Gained by Overcrowding (1912) that argued and attempted to prove the desirability of low density housing and the need for open spaces.[14] In an earlier work Town Planning in Practice:

[14] Roy Lubove, Community Planning in 1920: The Contribution of Regional Planning Association of America. Pittsburgh:

An Introduction to the Art of Designing Cities and Suburbs (1909) Unwin had advocated for a proper system of town planning as a deliberate activity to secure all the necessary elements for a healthy condition of life and these ranged from civic art to site planning and transportation. He argued against hereto great preoccupation with street layouts and excessive amount of land used for streets at great expense and sacrifice to other land requirements of the town, such as parks and open spaces. Unwin showed that it was possible to for example build the same number of houses by cutting down on needless streets and devoting the area for gardens and playgrounds and for improving the surroundings of the town.[15]

Another influential group to this new direction was the "Congres Internationaux d'architecture moderne", (CIAM) which made a series of attempts from June 1928 onwards, to address some of the problems facing architecture and planning. Dominated by some of the leading architects and urbanists of the period, Walter Gropius and Le Corbusier among others, CIAM emphasized the need to address the social and moral issues rather than purely stylistic. The Athens Charter (1933) for example identified what they called four primary functions of the city, namely; dwelling, recreation, work and transportation.

University of Pittsburgh Press, 1963.

[15] See Raymond Unwin, "Nothing Gained by Overcrowding", 1903.

The crisis of the Great Crash of the 30's was to a great extent the turning point for planning and gave it its first mandate. It forged scientific management-efficiency and zoning regulations for securing public interest. It gained, for the first time, recognition as an important activity, urgently needed to regulate the market mechanism, which at the time was in complete disarray, with depression and widespread unemployment. Planning, it was felt, was needed to bring about a more efficient and equitable distribution of resources. Although there was a cautious acknowledgement of planning in the beginning, it soon gained recognition at both national and local levels. It proved to be a very significant period for planning activity. The period also represented the beginnings of the New Deal Legislation, in the U.S.A. Because of the economic turmoil of the period and the need to coordinate economic and administrative policies focusing on regional resources development, the U.S. Congress created the Tennessee Valley Authority (TVA) in 1933. TVA was given grand mandate to oversee the conservation and development of a large region, the Tennessee Valley, whose people suffered poverty and its land was in woeful neglect. It was the first significant experiment in regional planning and resources development. The Tennessee Valley Development became a significant force in shaping later policies related to resources planning, development and conservation.

Planning gradually became a tool, albeit of limited nature, to intervene initially, only in certain markets, rather than in the whole economy. It also shifted the emphasis from the pursuit of order and efficiency that the neo-classicists were strongly advocating, to a more objective and effective rational scientific approach in dealing with the growing uncertainties and irregularities of the market place[16]

In the post World War II years and as a result of the growth of science and postwar technology two strains of thought persisted, namely: the control of the urban proliferation through dispersal and decentralization, and rectifying regional disparities through positive government intervention. The main focus seemed to be on control on the one hand, and development on the other - control of the physical forces that shape the form and design of the urban fabric and its land uses, and the development of new infrastructures and job creating opportunities.

One of the first reports to address the issue of land planning and slum clearance was the Chamberlain Report (1920) in U.K. Chamberlain as chairman of the Unhealthy Areas Committee recommended dispersal and decentralization as well as development of garden cities to be founded in the countryside. The garden cities were to have a population of

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[16] Alan Budd, The Politics of Economic Planning. Glasgow: William Collins and Sons Co., Ltd., 1978. pp. 47-57.

30,000 to 50,000 and were designed to provide the best working and living conditions.[17]

Three other important commissions followed which strongly influenced future planning directions, both in the U.K. and Canada. The Barlow Report (1940) commissioned to study the problems of the distribution of the Industrial Population, was the source of much of the postwar planning policies, followed by the Uthwatt Report (1941) on Compensation and Betterment and The Scott Report (1942) on Land Utilization in Rural Areas.[18]

These studies called for coordinated and comprehensive developmental efforts at both the national and local levels to solve the various urban problems and bring about desired changes. The Barlow Commission report was the first official recognition by the Government of the need to examine the distribution of population settlements nationally. It was also the most influential in fostering the idea of a comprehensive approach for town and country planning. The study pointed to the weaknesses in the existing town and country planning legislation and recommended the creation of a centralized authority a Planning Board to ensure national

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[17] Chamberlain's report was influenced by Ebenezer Howard's, Garden Cities of Tomorrow (1898).

[18] The Royal Commission on the Distribution of the Industrial Population, Sir Montague Barlow, 1940; The Expert Committee on Compensation and Betterment, Mr. Justice Uthwatt, 1941; and Report on the Committee on Land Utilization in Rural Areas, Lord Justice Scott, 1942.

action in dealing with the urban congestion. It called for decentralization of industry and industrial population to satellite towns/garden cities to ensure a more balanced development

No doubt influenced by Howard's "Garden City" idea, the report was also influential in introducing the New Towns Act of 1946 which advocated a number of new towns surrounding the City of London and in other parts of the U.K. If any criticism was levelled against the Committee, it was for its mild approach and for not going far enough with much stronger recommendations in dealing with urban population congestion.

The post World War II years also saw a shift in emphasis. Planning became more centralized and legalized with the creation of planning units at the various levels of Government, promulgating new controls in land uses and enactment of statutory planning legislation.

The 1950's and 60's in the UK and USA oscillated from no planning to full intervention into the market system, generating new awareness for human rights and concerns for the social costs that the expansive economic development was generating through its growth inequities. Emphasis on public interest and concern for public participation in the decision making process at almost all levels of government, was being increasingly recognized.

There was also attempt made at the so called "Indicative Planning", to bring the private sector of the economy into closer relationship with the policy-making structure of the Government, which in the U.K. culminated in the preparation of the first National Plan, in 1965.[19] The Plan was abandoned in the following year and emphasis was placed on the decision-making processes, rather than on plan making. In the U.S.A. the concern shifted to improving the decision-making techniques of the executive branch of the Government, mainly through the development of systems analysis, which later became the panacea in planning techniques.

The war on poverty in the 60's further expanded government intervention from economic and physical spheres, to social welfare and for more equitable distribution of public goods and services. Such a large and complex mandate and domain of concern generated a boom in planning and in urban theories directed particularly at urban poverty and the increasing deterioration of the urban environment.

Planning theories, as a result, saw shifting emphasis keeping up with the expanded mandate it now had. Moving from the strictly physical planning theories to theories modelled on social sciences with emphasis on procedural aspects, developing complex urban taxonomies, systems analysis and varied scientific methodologies, borrowed often in-

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[19] The National Plan was not a physical plan but a policy and budget plan allocating resources to different development sectors.

discriminatedly from allied disciplines, particularly sociology, economics, and geography.

The introduction of the administrative and organizational behavioural theories by H. Simon (1945), Dahl & Lindbloom (1953), Meyerson & Banfield (1955), and the emergent emphasis on operations research, cost benefit analysis, program budgeting and simulation models developed during World War II, into the planning process, resulted in free for all activity.[20] The resultant planning activity was akin to "bricoleur", a handyman who according to Levi-Strauss (1962), assembles materials and tools with the hope that they will be handy when problems arise.[21]

In principle, planning remained entrenched in the scientific mode of thought processes, - in postulating hypothesis, designing efficient alternatives and selecting the best course of action, as its routine activity. It remained grounded in the tradition of utility function in economic

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[20] Herbert Gans, People and Plans. New York: Basic Books, 1968, p. 71. Melville Branch in his article "Delusions and Diffusions of City Planning in the United States" in Management Science, Vol. 16, No. 12, Aug. 1970, pp. 714-732, identifies three groups of theories-systems analysis, scientific method and urban dynamics. In the first group he includes general systems theory, operations research, etc.; the second group covers decision theories, organization and management theories and theories related to planning processes such as advocacy planning the the third group includes theories of location, central place theories, concentric zone theories, etc.

[21] Claude Levi-Strauss, The Savage Mind. London: Weidenfeld and Nicolson, 1976. pp. 16-33. ("Bricolage" is a kind of do it yourself science).

terms, increasing aggregate social welfare in sociological terms, and ordering preferences for optimum distribution of resources in planning terms.

Although variations on the theme exist and in fact some radical departures are fast emerging, the practice of planning continues to play the subordinate role it has traditionally, held in relation to the political system. In essence it is deeply engaged in resolving its own inherent conflicts and contradictions; conflicts between the real intentions of planning and the political realities between ideal public good and diverse vested interest groups and between the pursuits of social equity and the forces of inequality. These were and are the greatest challenges that planning is faced with and thus the need for new directions in planning that can address these issues in an effective way, is becomming increasingly necessary.

Chapter II

EPISTEMOLOGY OF PLANNING

"Life can only be understood backward but it must be lived forward".

Soren Kierkegaard.

2.1 REASON AND NATURE

One of the earliest and the most persistent influences that has dominated planning, is the doctrine of Rationalism and Empiricism which fused into what is generally known as the "scientific method".

Briefly, the die was cast with the scientific revolution of the 17th century, when it eclipsed the former epistemology of knowledge, the mysticism of St.Augustine (354-430), and the medieval scholasticism of St. Thomas Aquinas (1224-1274), and replaced the power of faith, in favour of reason and experience to reveal truth.

Prior to this revolution man was the unchallenged master, and the world moved round him. Protagoras, the most famous Sophist (c 500 B.C.) stated that "Man is the measure of all things, of things that are that they are, and of

things that are not that they are not."[1] It was a world of harmony created by faith in God and by reason in nature - everything revolved around man and his world. The scientific revolution displaced man from this central position and made him incidental to the cosmos, but at the same time gave him powers through science to control and order the world in service of mankind. It was the theories of Copernicus (1473-1543), Kepler (1572-1630), and Galileo (1564-1642), with the triumphant experiments by Newton (1642-1727), that ushered in the scientific era. The world was now only a satellite in the vast system of the universe.

Two of the principal proponents of scientific method were the English empiricist Francis Bacon (1561-1626), and the French rationalist Rene Descartes (1596-1650). Bacon maintained that sense-experience is the source of all knowledge and formulated a method of experimentation and inductive logic. Descartes maintained that reason instead of experience was the source of all knowledge and expounded a method of deductive logic based on "a priori" beliefs. Bacon saw the Universe in terms of sense-experience, while Descartes saw it in terms of mathematical order. The Baconian empirical method resorted to experience and experimentation by inductive inferences as a means of arriving at truth, while the Cartesian rationalistic method resorted to logic of rationality, the use of reason and deductive infer-

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[1] See Plato's Protagoras and also Theaetetus (c 370 B.C.).

ences as the source of truth. Both epistemologies embodied an essential duality. The Cartesian dualism distinguished between 'mind' and 'matter'. Both emanating from God, the 'mind' was endowed with freedom to act but only according to the dictates of morality, 'matter' was fixed and acted only according to the laws of nature. Baconian dualism emphasized the power of 'knowledge' on the one hand and the mastery of 'nature' in pursuit of 'practice' on the other. Bacon believed that deductive method was restrictive and could only produce tautological inferences (in which the premise necessarily entails conclusion). New knowledge according to Bacon could only be derived by inductive method, based on observation of experience, analysing and testing it experimentally, to produce a theory or law.

Bacon and the other empiricists like T. Hobbes (1588-1679), J. Locke (1632-1704), G. Berkeley (1685-1753), and D. Hume (1711-1776), believed that human knowledge was essentially based on experience derived from observing the surrounding environment and structuring it in the human mind. This human knowledge would be limited to those aspects gained from experiencing the environment - man was not free to seek knowledge independent of the knowable environment, they argued.

Descartes and the other rationalists, B. Spinoza (1632-1677) and Wilhelm Leibniz (1646-1716) believed, that knowledge emanated from the innate capabilities of man - it

is a product of his mind and native capacity which he reflected on the environment. Man was thus free from the constraints of the environment and thus free from the controls of nature. I. Kant (1724-1804) on the other hand argued, that knowledge cannot originate from either the thought process or sense experience independent of each other, and as such the two could not be differentiated. That is the "phenomena" and the "noumena", are in essence, only perceptions and constructs of the reality; that is, knowlege is not reality itself, but the way in which reality appears to us.

Francis Bacon was also to an extent a rationalist and he sought the synthesis of empiricism and rationalism in what is generally known as the 'scientific method'[2] which is akin to 'rational method' since both subscribe to the same logic of reasoning.

Basic to all these arguments is the existence of 'causal' relationships, which was later expounded on by D. Hume (1711-1776), T. Hobbes (1588-1679), and J.S. Mill (1806-1873). Causality presupposes that every event is necessarily conditioned by preceding cause, although the principle of causality, as Kant noted, does not necessarily guarantee that a causal explanation is possible in every case.[3]

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[2] It must be noted that the rationalist and the empiricists school of thought are generally seen as separate and antagonistic to each other.

[3] Kant maintained that causal order in the universe existed

Science always assumes that everything in existence is rational and with a purpose - that the world is mathematically discernable, and that it is thus deterministic and possesses only objective discernable characteristics. Such a tenet of course implies "reasoning from purpose" a teleological construct and as such believes that both the biotic and the abiotic system has a reason and a predetermined function. But what is not understood is that the science or the mechanistic method does not explain the "WHY" or for what purpose, but only "HOW" in causal terms.

Briefly the aims of science are twofold:

1. To describe physical phenomenon as it exists.
2. To explain its causal relationships.

The scientific method,[4] as an instrument of science, follows the logic of reasoning in an attempt to discern the causal relationships and proceeds in the following sequence:

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only because it was imposed by human minds.

[4] Distinction is often made between the Scientific Method and the Analytic method. The former uses scientific reasoning, wherein hypotheses are formulated, measured and tested and truth or falsity are drawn from evidence outside the statement itself; while the analytic method uses the logical reasoning of deduction and induction, wherein the truth or falsity of the statement can be inferred from the statement itself (see B. Lonergan. Insight: A Study of Human Understanding. New York: Longmans Green & Co., Ltd., 1965).

1. Observation and recording of data based on experience.
2. Classification of data according to their similarities or dissimilarities, and distinguishing their functions and causality
3. Constructing tentative explanatory hypothesis by inductive generalization.
4. Inferring theory by deductive inference.
5. Verification of theory with factual data by experimentation.
6. Formulation of theory or laws.[5]

This is essentially the basic formulation of scientific method that planning adopted in its methodological applications. The thesis maintains that this adoption of scientific method in planning methodology was done without adequate questioning of the validity of the premises, their amenability to planning and the utility of the results achieved.

Planning methods followed a similar sequence - initially following Geddesian model (1915) of "Survey-Analysis-Plan". Patrick Geddes, a biologist, attempted to link thought to action by using socio-biological analogy to social problems. He advocated the use of survey-analysis-plan as a planning technique; survey of the existing social, cul-

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[5] See Leczek Kalakowski, The Allienation of Reason: A History of Positivist Thought. New York: Doubleday & Co., Inc., 1968.

tural and environmental conditions and their historical antecedents; analysing the data thus gathered, and preparing a synoptic plan. By using the concept of "Folk-Work-Place", as the key elements in planning methodology, Geddes maintained that a more comprehensive and biologically organized understanding of the place could be obtained. The basis of this civic survey was his belief, that urban development was an organic process. This idea of Folk-Work-Place was borrowed by Geddes from the French sociologist, Frederick le Play (1806-1882) who had suggested "Lieu-Travail-Famille" Place-Work-Folk in his Les Ouvriers Europeens (1855). Le Play combined statistical methods with the survey of living conditions not only to understand the living environment but to plan the future. Later a more expanded version, became common in planning practice:[6]

Determination of objectives

Identification of Alternatives

Selection of the best Alternative

Preparation of Master Plan

Implementation

Evaluation

Further modifications appeared over the years, but in essence they all subscribed to the strict canons of the scientific method.[7]

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[6] See Patrick Geddes, Cities in Evolution. New York: Howard Fertig, 1968.

[7] Michael Fangance, Citizen Participation in Planning and

In science, what matters is causal relationships, purpose is of little consequence. All science does is attempt to reduce the chaos of perception to an order, determined by reason, and it is this transformation that formulates the laws of causality. Science cannot tell us what our objectives are or how to select them or decide on their merit, importance or preference. It can, however, tell us how to achieve them and the means to achieve them. In planning, the reverse should be the important consideration, given that the function of planning is both to determine the goals to be achieved and the means of achieving them. The scientific method has an ingrained belief that it is seeking truth and that this is possible through the use of empirical scientific method. Pursuit of truth in itself is of little help in planning, not only because it is illusive but because it is of no significant value either in identifying or solving planning problems nor in guiding change.

However these Baconian and Cartesian views of nature and knowledge development still continue to dominate planning thought, by emphasising order, uniformity and understanding of the causal relationships, but for what purpose is still not clear.

R.M. Sarly. The Planning Process. Working Paper No. 2, Planning Methodology. Research Unit. School of Environmental Studies, University College London, 1972, provides a good discussion on the various planning models and methodologies currently in use.

2.2 SCIENCE AND SOCIETY

Although the Age of Reason set the stage, the Age of Enlightenment that followed produced the most dramatic changes in intellectual thinking. While the Age of Reason and its counterpart the Scientific Revolution were concerned with the explanation of phenomenon "as is", The Age of Enlightenment was concerned with what "ought to be". It was a shift from natural sciences to moral sciences. This is a very significant distinction that becomes critical in city planning discourse. It was an attempt at operationalizing the laws of nature by seeking rational social order in the behaviour and affairs of man.

The "philosophes" of the eighteenth century, - the precursors of the Enlightenment, were not satisfied in merely understanding the natural order that reason and nature provided, nor simply in postulating a social political order derived from the natural model. More importantly, they were interested in promoting the new order and seeking its realization.[8]

> "The eighteenth century was not only the Age of Reason, it was the Age of Reason applied to conduct, an age in which the messianic and the contemplative were more or less united in the 'philosophe'."[9]

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[8] W. Langer, ed., Western Civilization. Vol.II. New York: Harper & Row, Publishers Inc., 1968. pp. 185-207.

[9] Everett Knight, The Objective Society. London: Routledge and Kegann Paul, 1959, p. 19.

Believing in the inherent goodness of man, they saw no impediment to creating a whole new society through the effort of human mind - the rational mind. Two essential elements of enlightenment were critical to planning - they were Nature and Reason. Nature was a simple ordered rational (based on reason) system behaving according to mathematical laws. This in turn was based on the belief that there is reason in nature and therefore reason in man, because man was part of nature. By discovering laws of nature, it was then possible to apply the same laws to man.

Such a belief automatically sanctioned the pursuit of "good", since "good", equated with truth on the premise that whatever was rational or natural, was intrinsically true and therefore good. This provided the rationale or moral code to the era of the Enlightenment.

Planning adhered to this dictum as well, but sought truth not in its purpose but in its method. This was based on the rather simplistic assumption that objective truth was in fact attainable, even if it was desirable. Objectivity became dogma for the Age of Enlightenment and made scientific truth the criterion for all truth. Objectivity says Knight "is faith in the possibility of universal agreement".[10] Objectivity thus becomes the end purpose and essentially the whole "raison d'etre" and was even regarded as

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[10] Everett Knight, The Objective Society. London: Routledge and Kegan Paul, 1959. p. 20.

"truth" itself.

A characteristic of the Age of Enlightenment was the belief that man was, by nature, a social animal and the thrust shifted from pure scientism to more humanism, particularly as a result of the work of the Encyclopedists. The Encyclopedists emphasized re-education of man, liberalization and social reform emanating from the people. They were concerned with teaching men to act in an orderly and rational way. as Langer puts it

> "For them, science was no mere technique for knowing, but an ideal for living, a guide to lead men out of ignorance and bondage."[11]

The giants of the period Voltaire (1694-1778) and Diderot (1713-84) were convinced that a new social order was possible, a social order that by far could surpass the existing one, and they were convinced that this could be achieved through a rational social and political order fashioned on the scientific paradigm. Man is endowed with reason said Voltaire "not that he may penetrate the divine essence but that he may live well in this world". To enlighten the people they compiled the Encyclopedie (1750-1770), under the editorship of Diderot, and with contributors such as d'Alembert, Voltaire, and Rousseau. It became a document of public philosophy and it discussed many facets of human inquiry, from theory of representative government, of inalienable rights, to the guarantees of civil liberties. It

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[11] W. Langer, op.cit.,Vol. II, p. 185

gave new impetus to social sciences - but only as a rational science. Its basic intent was not only to communicate knowledge but more importantly to bring about a change in the prevailing thought pattern.

The Encyclopedists also set codes and reforms that were to encourage despots and governments to adopt regulations and legislation to bring about human progress and betterment. But such was not the case; abuses were rampant and the ultimate goal of happiness was reduced to the accumulation of wealth and the pursuit of pleasure by a few at the cost of many.[12]

Although with a slight variation in emphasis, another important figure was Giambattista Vico (1668-1744) who had also recognized the need for a science of society. In his Scienza Nuova (1728),[13] Vico rejected the Cartesian disregard for history and the belief that there is only one valid method of inquiry. He explicitly noted that true knowledge of nature was impossible, given the fact that nature was made by God and not man, and man could therefore never fully understand true nature. The study of history he argued was very important. Man can only be understood historically, because it is through the understanding of history, that one can understand the nature and evolution of hu-

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[12] W. Langer, op.cit., Vol. II, pp. 202-205.

[13] See G.B.Vico, The New Science of Giambattista Vico, trans., T.G. Bergin and M.H. Fisch. Ithaca: Cornell University Press, 1948.

man society, and thus better be able to change it. It is through the works that men produce, such as the laws, literature and other intellectual activities that we can understand man himself. Every theory Vico says " must start from the point where the matter of which it treats first began to take shape ".

In planning likewise, many utopian thoughts emerged as discussed earlier, to reform men, founded upon the philosophy of reason and humanity, seeking justice and welfare for the community, with individual liberties subsumed in the greater good. But all these had little effect in moulding the practice of city planning, except in further entrenching the scientific paradigm in almost all activities of men.

2.3 NATURALISM AND LIBERALISM

The Romantic period (19th century) that followed the Enlightenment brought about a distinct shift in intellectual thought. It represented a reaction primarily against rigid canons of reason and mathematical formality. It was primarily a reaction against classical beliefs that moulded men and nature in the idiom of natural order of regularity and simplicity, and imposed that order on the conduct of man's institutions and artifacts. It was a shift from society as the prime focus to the individual and the place of the individual in society, nature and the universe.

Inasmuch as the age of enlightenment was associated with the rational individual, who voluntarily served the common good, the romantic period sought to free man in pursuit of his unique characteristics, and his individualism, to seek new experiences and develop his feelings emphasizing diversity in keeping with dictates of natural law. Hobbes in Leviathan (1651) however perceived human nature differently. According to Hobbes "it is war of all against all" - the state of nature is a state of war, that can be brought under submission only through contract and through planning - contract of absolute submission and planning to safeguard individual interests.[14] Such contractual arrangements differentiate the individual from the society in the first instance, and then subjugates the individual in society as a consequence. These various arrangements are more of a rational gymnastics than a serious attempt at understanding the individual as an entity and as part of the natural system.

The search for universally valid standards based on truth in Nature, (Nature being right reason and men being part of nature) was being slowly replaced by new idioms such as "beauty without order" or "beauty in irregularity". The Romantics sought to free themselves in search of freer thought and freer actions. They stressed idealism, creative freedom derived not through reason alone, but through self

[14] See Thomas Hobbes, Leviathan. Harmondsworth. Penguin Books, 1976.

fullfilment and human will. They sought to escape from the industrial urban order and all it represented, to seek refuge in nature, in rural experiences.

"Return to Nature" became the rallying call. To imitate nature was to understand the free forms of nature, its richness, its diversity and its complexity, removed from the classical pursuits of symmetry and order, grounded in exact mathematical proportions. "To want simplicity was to fail in conformity with nature".[15] It also meant to fail in understanding nature. Irregularity was becoming the new virtue. Chaos now implied order misunderstood. Although, Pope (1688-1744) believed that it was possible through science to reveal the unity of nature, he also maintained that nature was indeed complex and was governed by its own laws and behaviour. In his "Essay on Man, Epistle 1", he expresses these sympathies most eloquently.

> "All nature is but art unknown to thee All chance, direction thou canst not see, All discord, harmony not understood; All partial evil, universal good And, spite of pride, in erring reason's spite, One truth is clear, whatever is, is right."[16]

In the affairs of men, Romanticism is epitomized in works of Rousseau (1712-1778), a member of the Encyclopedists of the Enlightenment era. Not because of "back to nature" or "the noble savage" ideas incorrectly attributed to

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[15] A.o. Lovejoy, Essays in the History of Ideas. New York: G.P. Putnam and Sons, 1960, p. 143.

[16] Alexander Pope, Essay on Man, Epistle I, in Collected Poems. London: Everyman's Library, 1975. p.189.

him, but for the new idealism, new freedom and new pursuits in restructuring men and society.

Perhaps one of the earliest theoretical constructs that planning meant - restructuring society - is found in Rousseau's book, Discourse on the Arts and Science (1750). In this book he argues that man is inherently good by nature, but corrupted by science and learning the "social graces". In two subsequent famous treatises he expanded on this idealism. In Emile (1762), he proposed to reverse the entire educational system prevalent, by simply relegating reason to the last faculty to be developed, and letting the child grow in accordance to its own nature in a rural setting. Likewise in his Du Contrat Social (1762) he put forward a model for an utopian society. A good society he argued, is one in which the individual makes the laws he obeys and as well assumes responsibility for them. It is "the duties of man and needs of nature" that are important. It is the individual in society that constitutes the society; it is the active participation of the individual in the affairs of the society, in pursuit of the "General Will" that would eventually endow the common man with powers to dictate and create laws. "Consent" as the basis to govern and "contract" as a basis to safeguard the rights of the individual, constituted essential elements in human conduct, according to Rousseau.[17]

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[17] See J.J. Rousseau, Discours sur les Sciences et les Arts, Paris, 1750.

The roots to some of these Romantic beliefs are derived from the Eastern ideas that became popular in Europe in the 18th and 19th century. Eastern thought generally perceived nature in its varied complexity, richness and intricacies. The word "sharawadgi", for example, is quite unique to Chinese thought, with no equivalent in English. It represents the idea of feeling, of surprises of excitement wherein nature is understood as a phenomenon that is ever changing and manifesting itself in many surprising and unique forms, as a "quality of being impressive or surprising through careless and unorderly grace."[18]

Two basic themes emerge from Eastern schools of thought - "unity" and "interrelatedness" among the various phenomena in the natural system. These constructs are not in any ordered form, but in a dynamic transcedent form. In Hinduism, the unity is represented in the Vedic triad of "Karma, Moksa and Samsara"; Karma meaning release from the laws of cosmic forces; Moksa, is attaining the eventual freedom (liberation) and deliverance, and Samsara, is the cycle of transmigration, the process of change and eventual unity. This is done by understanding and obeying the creative forces of life, the surprises of life which are seen as positive elements. Zen likewise sees unity and interrelationships as the one and same phenomenon. Man is perceived as an integral part of the universe, whose basic principle is relativ-

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[18] See A.O. Lovejoy, Essays in the History of Ideas, New York: G.P. Putnam and Sons, 1960, pp. 75-143.

ity with no end or purpose to be attained. The search for "Nirvana" in Buddhism, implies the existence of "Samsara". The real "Nirvana" in other words cannot be desired, in as much as "Moksa" cannot be a goal, simply because neither can be conceived, a priori. A saying in Zen epitomizes these thoughts best:

> When one looks at it, one cannot see it; When one listens for it, one cannot hear it. However, when one uses it, it is inexhaustible.[19]

Such beliefs tend to present the natural system in quite a different perspective - for one thing it is devoid of any ordering or formalization to a set of rules conceived by men.

The Romantic period infuenced not only Art, but Poetry, Literature, Architecture, Landscape Architecture and City Planning. It gave city planning a new idealism and release from the constraints of the scientific paradigm. City was returned to nature by way of parks, gardens and boulevards, now often interspersed randomly to create surprises, excitement and grand vistas. These parks and meadows were treasured for their spiritual value as places for simple virtues and pleasures and represented a positive attempt at restoring the balance between the city dwellers and nature. Frederick Law Olmsted (1822-1903) the father of this landscape movement saw urban parks as indispensible for the sur-

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[19] Nancy Wilson Ross, Three Ways of Asian Wisdom. New York: Simon and Schuster, 1966, p. 188.

vival of the urban civilization. It would seem, however, that unlike other arts, planning failed to capture the opportunity to its fullest benefit. Here was an opportunity for a new paradigm, a paradigm that could guide planning towards greater harmony with nature, that advocated the greater use of commonsense. To plan with nature in essence meant commonsense planning, at least to the Romantic naturalists. It was an opportunity to reinstate the individual, to reinstate humanism in city building.

Romanticism was arguably an escape, an escape from the rigid cannons of science and technology that had threatened the survival of individual, of human feelings, and of human freedom, all in the name of reason.

2.4 SCIENCE OF SOCIETY

2.4.1 POSITIVISM

One of the important schools of thought that had some of its roots in the Enlightenment discourse discussed earlier was Positivism. The Positivist philosophy was based on the certainties of science and rejected anything in the domain of metaphysics - to them, observable phenomenon constituted knowledge. One of the factors, they argued, that determines true knowledge is practicability, the instrumental utility of science. Two perspectives eminated from this particular school of thought. The Mechanistic model following Comte (1798-1857) known as the French School that pic-

tured the world as an ordered, static, and deterministic system; and the Organismic model, the German School following Hegel (1770-1831) that saw the world as a dynamic growing and changing system.[20]

Saint-Simon (1760-1825) and Auguste Comte were the two earliest exponents of the French school of Positivism or the naturalist science of society called rational sociology (a word Comte coined meaning science of society or social physics). It represented the earliest attempts at quantifying and analysing society in scientific idiom with maximum objectivity. They believed that social development could indeed be guided by rational principles and that functional antagonism could in the end be replaced by perfect equilibrium.

The Enlightenment, the Positivist argued, had not succeeded and the Romantics on the other hand, created chaos and anarchy in society. There was a need for a new intellectual basis founded on the principles of science - science they maintained was necessary and can provide the needed instruments for order and progress for moral and social life. The laws of social physics could guide society and identify changes as and when needed. Principles of sociology or science of society would in the end dominate. It was an at-

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[20] Hegel and Comte were once considered the exponents of sociology. Hegel from the German Romantic school was dialectical and rational while Comte from the French Enlightenment was empirical and anti metaphysical.

tempt at a comprehensive look at supposedly objective facts in the idiom of scientific method.

Comte distinguished three stages of human development, namely the 'religious', the 'metaphysical' and the last and the most productive, the "scientific". It was through the last stage of development, according to Comte, that any positive contributions to the problems of man and nature could be realized. For Comte, knowledge meant prediction, to know was to foresee. It was a mechanistic model that couched human behaviour in the mould of science and technology, to analyse and organize for a purpose.

These two principal schools of thought the Mechanistic, and the Organismic schools, saw their fusion in the works of Herbert Spencer (1820-1903) and in the works of Charles Darwin (1809-1882). Spencer believed in scientific unity - the "Synthetic Philosophy", in the evolution, in growth through increasing differentiation and integration. He differentiated between commonsense knowledge and scientific knowledge and believed that the natural universe was governed by both physical laws and by social phenomena. His view of the society was one of organism - self generating and evolving rather than mechanistic, and static.[21] Darwin's, The Origin of the Species (1859) fused the mechanistic and organistic world views into an evolutionary perspec-

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[21] See Russell Keat and John Urry. Social Theory as Science. London: Routledge & Kegan Paul, 1975. pp. 71-95.

tive of growth and change, involving survival of the fittest.[22] Darwin perceived growth and change as a series of adaptations, as an organizing, differentiating, and ordering principle, what he called a process of "natural selection".

Another important social theorist in the Positivist school of thought was Emile Durkheim (1858-1917). He was a functionalist and a naturalist who borrowed from the biological sciences in formulating his theories about society as an organism. He believed that human behaviour could be studied using methods and procedures of natural sciences, examining cause and effect relationships. Durkheim's main preoccupation was to develop a genuine science of society and thus provide a guide for social action.

These intellectual developments no doubt influenced planning thought. Analogical similarities between growth of animals and city as an organism began to emerge. Patrick Geddes (1854-1932), a biologist and town planner, talked about the city as an organism, as a living entity in constant state of evolution and growth. Frank Lloyd Wright (1869-1959), a foremost architect of this century, wrote on "Living City" and on "Organic Architecture", to bring natural form to architecture and the cities, by drawing inspirations from nature herself. Bruno Zevi in Towards an Organic Architecture (1950), argued for organic architecture as

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[22] See Charles Darwin, The Origin of the Species. London: Collier- Macmillan Ltd., 1967.

against classical architecture which he maintained represented an obsession with ideal forms at the expense of change and function. Such ideas captured the imagination of architects and planners, who rushed to apply biological analogies to almost all aspects of city planning, and city as a living entity became firmly rooted in planning thought.

2.4.2 LOGICAL POSITIVISM

The other important school of thought with similar roots, that influenced planning is the school of Logical Positivism which was eventually replaced by the Hypothetico-Deductive Method and later the School of Pragmatism.

The School of Logical Positivism centered around the Vienna Circle in late 1920's and was associated with such men as Ernst Mach, Moritz Schlick, Rudolf Carnap, A.J.Ayer, et al., and had its roots in the ideas of David Hume and the British Empiricists School. The main thesis of this School of thought was that philosophy is not a doctrine but an activity and it is not a theory but an analytical method whose function is not to formulate propositions but to explain them. They were reponsible for formulating the 'principle of verificability', that is 'the meaning of a proposition consists in its method of verification'.

The positivist maintained that science was a rational, objective and empirically based activity, the aim of

which was to explain and predict phenomenon in nature. Philosophical propositions they argued were either analytic or synthetic but not both. By analytic they meant "statements of formal logic" and by synthetic, they meant "statements of science", based on empirical evidence. All other propositions were not knowledge. They rejected metaphysics, psychology and deductive methods and believed that true knowledge can only be obtained by observing phenomenon and by understanding their interrelationships. Arguments based on intuition or revelation was immaterial because they were outside the realm of observation and experience. Metaphysical positions they argued were products of meaningless combinations of words, and as such did not constitute legitimate knowledge.

All knowledge according to the Positivist is then ultimately derived from two important sources:

1. sense-experience.
2. logical analysis of language.

The Positivist generally rejected the notion of interrelating facts and values, since the latter were not derivatives of either sense experience or logical analysis. Such knowledge could not therefore be subjected to the canons of scientific examination that required a rational procedure for testing a hypothesis and either accepting it or

rejecting it.[23]

Wittgenstein's "verifiability principle" which states that the meaning of a proposition is in the method of its verification, was adopted by the Logical Positivists in their theoretical formulation. A.J.Ayer likewise noted that if a proposition could not be verified empirically, it was of little use, meant nothing or became a tautological proposition. These conditions rendered all theories based on subjective discourse or that could not be subjected to empirical tests such as theories in morality, law, politics or social theories, essentially useless. The movement however lost its drive and by the 1930's the Circle had disintegrated. It was nonetheless a bold attempt at unifying the sciences and eliminating metaphysical beliefs.

Karl Popper rejected this verifiability theory and replaced it with "falsifiability criterion". Popper argued that scientific theories are not derived through inductive processes but through the creative process of imagination. A theory cannot, therefore, be confirmed for truth, but can only be subjected to falsification. A theory in other words can only be proven false, but never true.

With the abuses of capitalism, the decay of the social consciousness, exploitation and waste of the natural resources, the wanton pursuits of the leisure class, excel-

[23] See Richard Bernstein, The Restructuring of Social and Political Theory London: Methuen and Co. Ltd., 1979.

lently portrayed by Veblen (1857-1929), there appeared a shift from the rigid positivist thought.[24] William James (1842-1910), one of the intellectual forces of Pragmatism , recognizing the need to curtail the abuses, felt the necessity to establish certain positive controls, to direct society's energies in more constructive way, and as a result, "positivism" gave way to "pragmatism".

Pragmatism enunciated by Charles Peirce (1839-1914) was reformulated by William James and later developed by John Dewey (1859-1952), both of whom contended, that knowledge was simply an instrument for action and that its validity was based simply on function of its utility. A similar argument was also enunciated earlier by F.S. Schiller (1759-1805). Pragmatism as a philosophy attempted to harmonize morals with science and values, with experience and intelligent action.

Schiller maintained that the "incomprehensibility" of nature is a given, and that the "environment" is unknowable. Our beliefs about nature are heuristic - that is we continuously attempt to discover and interpret the world we live in, and it is based on our beliefs, and on the viability and plausability of our perception. In other words the world view is "made" and not "discovered", he maintained.

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[24] See T. Veblen, The Theory of the Leisure Class. New York: Mentor Books, 1953.

W. James argued that what was important and what indeed mattered was experienced facts and results of actions. It was the practical validity of knowledge that in the end provided the testing ground. The truth is in the value, usefulness and workability of any action or intellectual thought. An idea or action is considered true and valid, that is, it is good if it is useful. Dewey reformulated the philosophy of pragmatism into "Instrumentalism", which he noted as "a theory of general forms of conception and reasoning". As a theory of logic and as a guiding principle for ethical judgement, knowledge constituted power, and truth constituted usefulness.

Instrumentalism was an attempt at reconstructing philosophy into an instrument of conscious and deliberate action toward improving human lives by modifying human behaviour. Dewey believed that if these experimental methods in philosophy were applied to pressing social and political problems, a mere social change achieved gratuitously could be transformed into consciously created and directed social improvements. In other words it was a philosophy of action and kind of user oriented planning.

The myth of objectivity is increasingly being challenged and is slowly eroding. It is argued, that by employing scientific methods, problems <u>cannot</u> be understood in their <u>true</u> <u>nature</u>, nor can problems be viewed in their totality. Beginning with preconceived ideas and with errone-

ous assumptions interposing themselves, the process of understanding is often stultified, which in turn nullifies the inquiry resulting in wrong or unrelated answers or solutions.

Roger Poole maintains that there are three major objections to objectivity -

1. A tenacious and unquestioning grasp of the so called 'facts', represented by data and analysis of data.
2. A refusal to justify or even make public the actions and decisions it arrives at.
3. A preoccupation with parts, often at the expense of the whole.

This myth of objectivity associated with the scientific method did to an extent legitimize planning action and absolved the planner of any responsibility for any planning decisions.[25] It gave planning a degree of credibility and endowned it with a mantle of truth. Ouspensky suggests that it is evident from scientific observations "that the seeming rationality of human actions is an illusion and a self-deception". Man is an instrument of the natural forces, and goes on to say that:

> "Man does not perform a single action by himself. He is merely a prism in which a line of action is refracted in a certain manner. But just as the beam of light does not proceed from the prism, so

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[25] Roger Poole, Towards Deep Subjectivity. New York: Harper & Row Publishers, 1972, p. 46.

action does not proceed from the reason of man".[26]

Reade on the other hand suggests that it is a contradiction and sociological naivity to believe that a planner can be objective or neutral by merely responding to the wishes of the public, or that one can indeed be value-free and argues that

> "...if planning movement is to have any role in society, it must have the modesty to compete, as a value system, with the other value systems..".[27]

In other words planning has to recognize the inherent bias of the planner that will inevitably influence planning actions, that planning is in fact an ethic, and a value-based activity. A shift is now occurring away from the strict traditional Positivist philosophy derived from the natural science, toward a more Behaviouralist theory, that attempts to study man from the pattern of his behaviour. It is based on the belief that society can, in fact, be studied outside the realm of natural sciences.

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[26] P.D. Ouspensky, Tertium Organum. New York: Vintage Books, 1970. p. 166.

[27] Eric Reade, 'Contradictions in Planning'. Official Architecture and Planning Journal. Vol. 32, No. 10, Oct. 1969. pp. 1179-1185.

2.5 UTILITARIANISM, EFFICIENCY AND EQUITY

In as much as the Age of Enlightenment sought to determine human action through reason, (man being a rational animal) and the Romantics displaced it with feelings as being more akin to human nature, they did together, bring about a new synthesis as a guide to human action.

The concept of "utility", particularly "marginal utility"[28] (rather than total utility"), was a key idea in the late 19th century economic thought. It presented a more comprehensive understanding of the workings of the competitive economics. It was a concept capable of not only influencing value but also of assigning value as a sole consequence of utility. In other words, the utility of a commodity was directly related to its exchange value. Man as a rational economic man would thus attempt to maximize his utility factor, increase his pleasure and reduce his pain. The Utilitarians sought a guide to action in the "felicific calculus", a quantitative method (devised by Bentham) of assigning values to pleasure-pain factors.

The philosophy of utilitarianism states that the determination of an action as right or wrong should be based on the criterion of whether the consequences of such 'actions' maximize the utility function and lead to "goodness" or "badness". It was also called "act-utilitarianism" as

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[28] Marginal utility is the minimum level of utility below which activity is not profitable.

distinct from "rule-utilitarianism".[29] The emphasis of the utilitarians was in actions. It was the kinds of effects of an action that, in the end, determined between right and wrong decisions. This school of thought eminated originally from Francis Hutcheson (1694-1746) and was later enunciated by Jeremy Bentham (1748-1832), J.S. Mill (1806-73) and Henry Sidgwick (1838-1900). It is based on the belief that man attempts to maximize pleasure and minimize pain in the pursuit of happiness.

Thus, it is assumed that only those actions which provoke general happiness are good, that those which engender the greatest good for the greatest number constitutes right or good decision, and that in the process "quantity" becomes "quality" and "majority" opinion constitutes "right". Man is valued not for his intrinsic qualities but for the worth in terms of his contributions and usefulness to society. Inasmuch as it provided a rational guide and a justification to human action, it also proved to be, in effect, inconsistent in its purpose, and end results.

What constitutes good reason for action, and how the utility of consequences are, in the end, to be determined, remained some of the puzzling questions.

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[29] Distinction between "Act-Utilitarianism and Rule-Utilitarianism is dependent on whether it is the consequence of an action that determines the rightness or wrongness or whether it is based on the consequence of adopting some general rule of action.

The Utilitarians saw themselves as the guardians of public good and they thought they could enforce it through the powers of reason and legislation. This approach, of course was not new; it was derived from other moralists such as the social reformers, utopian socialists, philanthrophic experimenters and many of the evangelical movements, who were coerced more by economic exigencies than by moral conscience.

Two schools of thought emerged. The "egoistic" utilitarians believed that it was the duty of each individual to maximize his own utility, while the "universalistic" utilitarians saw it as an individual's duty to maximize everyone's utility as a benefit to others.

To deal with the dichotomy between individual happiness and general happiness, the Utilitarians proposed state intervention through legislation to safeguard the public interest and constrain abuses in individual freedom. In fact, to ensure that individual freedom coincides with public interest - and thus the public good - state interest thus became the public interest. Likewise "Efficiency and Equity", the two concepts that saw their greatest adherants in the Utilitarians and were so commonly used in city planning, became also the very mechanisms for the laissez-faire capitalist economy. They were simply techniques, designed to organize and order the urban morphology more efficiently and more equitably. Efficiency meant essentially physical efficien-

cy, using least energy and doing things more economically in terms of costs and benefits, and equity meant greater utility or usefullness of the individual in the society, and more parsimonious distribution of goods and services.[30]

The impact of this doctrine, perhaps the first ethical imprimatur for planning, was very significant,[31] particularly since the milieu of the time was characterized by the failure of laissez-faire, and the negative effects of the industrial revolution, which included poor housing conditions, rampant inequities, squalor, poverty and other ills that plagued the city. This was viewed as being offensive to human sensibilities and more importantly offensive to reason, and to the rational economic man.

As a result, efficiency and pursuit of technical solutions as an extension of design determinism, provided the new lexicon for planning and a new mandate, legitimizing its function. The concepts of 'amenity' and 'progress' as well,

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[30] The concept of efficiency is also tied to the notion of "vitalism", discussed in Chapter IV. Two meanings of efficiency were posited. One is, an efficient machine that converts the maximum of its energy into output of work done, with least waste, while the other is more in an utilitiarian sense which believes that a most efficient machine is one that produces maximum output for least input.

[31] The principle of utility became the basis of planning legislation in Victorian Britain, beginning with the planning legislation of 1912. But utilitarian planning meant economic efficiency, majority opinion, right decision and fairness. These variety of meanings evolved because the term Utilitarianism was never well understood nor meaningfully applied in city planning.

made their way into planning vocabulary. An "amenity" was something providing a good and healthy environment, and directed towards improving the quality of life while "progress" was viewed as an inevitable requirement and meant anything that contributed to the public good. Although naive, such postulations strongly affected planning practice. Technical solutions from a rigid scientific paradigm were put forward as answers to many urban ills. Slums, poverty, unsanitary conditions, overcrowding, could be eradicated through good aesthetics and efficient design and the social and moral problems plaguing the city could be solved. By creating well-planned urban surroundings, happy and healthy homes could be made available to the poor. Social intercourse thus would be facilitated and economic and social efficiency would be enhanced and general happiness would ensue.

In practice however, technical solutions created more problems than they solved. First, there was no consensus on the nature of happiness, nor what constituted progress, that the many city plans were advocating. Neither was it possible to determine whether it was individual actions or aggregate actions that in the end were important. Nor was it possible to determine how much pleasure or pain a particular action might cause, and how these consequences might be distributed. Most importantly, however, the principle of utility was not consistent with the principle of

justice, particularly social justice or distributive justice. What was needed was an ethical guide, that could operate, within the ambit of principles of justice, independent of the principles of utility which are by their very nature, consequence and action dependent.

Welfare economics or the contractual theory of distributive justice put forward by Rawls (1971), the theory of entitlement enunciated by Nozick (1973), or the theory of fairness by Varian (1974), attempted to address this dilemma. The welfare economics of the Utilitarian version remains vague inasmuch as it fails to address basic normative questions such as the choice of the social welfare function. Rawls' theory of justice attempts to redress these limitations in the distribution of welfare functions by seeking to distribute both the positive and the negative effects of actions.[32] Nozick is critical of both these theories on the grounds that they are concerned with present time only, and ignore the procedural aspects - they are he argues "ahistorical". Nozick suggests a procedural theory, in which the means used to distribute justice become of critical importance.

Varian's theory of fairness, on the other hand, is based on what he calls "extended sympathy" for the fairness or equity in the distribution of goods and services. Thus he

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[32] See John Rawls, A Theory of Justice. Oxford: Oxford University press, 1971.

says that both equity and efficiency are necessary ingredients and it is possible to have these properties in the allocation of the welfare functions.[33]

An early critic of Utilitarianism was Nietzsche (1844-1900) who disagreed with the Utilitarians on the grounds that he believed that some people were inherently more important than others and therefore could not be equated with one unit of happiness per person - as the utilitarian calculus posits. If the utility of the individual is important to the state, his unit of happiness should measure accordingly. This ofcourse implies discrimination by utility function.

More recently, Kenneth Arrow questioned if it is possible for collective choice to emanate from individual preferences.[34] In presenting his alternative called "ordinal utilitarianism", Arrow argued that the individual plays a central role in selecting his social choice from among alternatives. He uses his own preference or ordering system which, in fact, constitutes his value system, whether based on altruistic or selfish motives. The problem, however, is how to amalgamate a personal preference ordering system into

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[33] Hal R. Varian, "Distributive Justice, Welfare Economics, and The Theory of Fairness" in Philosophy and Economic Theory. ed., F. Hahn & M. Hollis. Oxford: Oxford University Press, 1979. see also Robert Nozick. "Distributive Justice". Philosophy and Public Affairs. 3 No. 1, 1973. pp. 45-126.

[34] See Kenneth Arrow, Social Choice and Individual Values. New York: John Wiley and Sons, 1951.

social welfare ordering for the benefit of both. This to him constituted the "impossibility theorem".

One of the important questions that arises is how to determine the resources allocation that would be socially optimal. This, it is suggested, can be achieved only through consensus or dictatorial rule. It has been argued for example that "Pareto Optimality", enunciated by Wilfred Pareto (1848-1923), is not adequate, - since the conditions under which a welfare maximum can be achieved, only occurs when a shift or increment in welfare functions accruing to an individual does not cause a decrease in welfare function to another individual. This would constitute an optimal condition. But since individuals cannot be made better off without someone else being made worse off, such a proposition is not very useful. Although the gains under the Pareto-Optimality measure are, by definition, greater than the costs involved, the number of people who will gain from such measures would be less than the number of people who stand to lose. Sen argues further about the "Impossibility of a Paretian Liberal",[35] wherein he maintains that the conditions necessary for Pareto Optimality are impossible in liberalism where a social decision function is a collective choice. The simple majority rule is limited both theoreti-

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[35] Amartya Sen, "The Impossibility of Paretian Liberal" in Philosophy and Economic Theory. ed. F. Hahn and N. Hollis. Oxford: Oxford University Press, 1979. pp. 127-133.

cally as well as practically.[36] Further, Arrow[37] maintains that it is impossible in fact to distribute social welfare in a way in which one desires, that is in the way in which it can satisfy five desirable axioms:[38]

1. "complete ordering" - assumes social preferences must be fully ordered in a way in which it satisfies all the conditions of completeness, reflexivity and transitivity;
2. "responsiveness to individual preferences" - assumes that given a set of individual preferences A is socially preferred over B. This axiom would easily be violated if the society discriminates against a certain group for example;
3. "Non imposition" - restricts any imposition of social preference on an individual preference;
4. "Nondictatorial" - an axiom that is self explanatory, that an individual preference should not constitute social preference; and
5. "Independence of irrelevant alternatives" - assumes that given a set of alternatives A B & C, society prefers A immaterial of B or C - even if C was not available A would still be preferred.

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[36] See D.H. Vinch, Analytical Welfare Economics. Harmondsworth: Penguin Books, 1971. pp. 115-202.

[37] Kenneth Arrow, op.cit.

[38] Most of the information on the five points that follow is taken from James M. Henderson and Richard Quandt, Micro-Economic Theory. N.Y: McGraw Hill, 1980. pp. 308-321.

Such diverse and conflicting intellectual discourse does not in fact help planners. The planner is still left in suspense dependent on mere numbers, on "felicific calculus", to define a simple majority, and to legitimize his actions as qualitatively good and as quantitatively right. Efficiency and equity, provide technical justification in terms of benefits outweighing costs and as an action whose benefits will serve the majority good. But such tenets leave out the oppressed minority whose interests are considered wrong because they do not represent the majority interests.

2.6 LINGUISTIC THEORY, STRUCTURALISM AND PHENOMENOLOGY

"Knowledge of Language results from the interplay of initially given structures of mind, maturational processes and interaction with the environment", wrote Chomsky.[39] He talks about grammar of language and grammar of vision in interpreting the world or in organizing the various systems of knowledge and beliefs. Wittgenstein likewise argued that a word has meaning only inasmuch as someone has imputed a meaning to the word.[40] Semantics says Leech is central to the study of communication as well as to the study of human mind - 'thought processes, cognition, conceptualization - all these are intricately bound up with the way in which we

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[39] See Noam Chomsky, Problems of Knowledge and Freedom. London: Fontana Books, 1975. p. 26.

[40] Ludwig Wittgenstein, Blue and Brown Books. London: Harper & Row, 1958. p. 28.

classify and convey our experience of the world through language'.[41] We are aware that there is a distinction between the real world and the world of language. In our attempt to communicate our perception we might be resorting for example to all the seven types of meanings that Leech distinguishes,[42] thus adding further to the complexity of interpretation. However one might look at it, there is a great deal of difference between understanding nature and understanding society, particularly if both are perceived in the language of the natural sciences since they are logically incompatible.

The great linguist Ferdinand de Saussure[43] (1857-1913), in the series of lectures he delivered at the University of Geneva (1907-1911) distinguished between 'synchronic' view of language, the system of language in its present state, and the 'diachronic' or the historical view of the language. For Saussure a word represents form rather than substance and words constitute a system of relations,

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[41] Geoffrey Leech, Semantics. Harmondsworth: Penguin Books, 1976. Introduction p. IX. (Semantics is the study of the meaning of language and linguistics is the scientific study of language.)

[42] Leech distinguishes seven types of meanings namely: Conceptual meaning (sometimes known as 'denotative' or 'cognitive' meaning); connotative meaning; stylistic meaning; effective meaning; reflected meaning; collocative meaning and thematic meaning. These are discussed in his book, and provide very useful insights in the context of meanings.

[43] See Ferdinand de Saussure, Course in General Linguistics. Trans. Wade Baskin, London: Fontana, 1974.

the understanding of which comes only through recognition and differentials.[44] The semiologists (theory of signs and symbols developed by the European followers of Ferdinand de Saussure), adopted an extreme rationalist position in conceptualizing the relationship between the world of ideas and the real world by simply ignoring 'external objects' altogether in defining the real world.[45]

There is no denying that inasmuch as language poses limitations in the interpretation of the external world, the real world with its ephemeral characteristics, poses limitations in the constructs of man's internal perception of the world. If we follow Descartes' dictum we could construct a 'true' model of the universe in our senses by simply following rational and logical argumentation. For Descarte, thinking was linked to acting. But such, it is argued, is not the real world - only a construct of the mind.

In an article in L'Architecture d'Aujourdhui (June/July, 1967), Francoise Choay introduced the theory of semiology (science of signs) in planning. In "Urbanism and Semiology"[46] Choay contends that language intercepts between man and his product in a kind of a reflexive relationship.

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[44] Jonathan Culler, Saussure. London: Fontana, 1976.

[45] Edmund Leech, Culture and Communication. Cambridge: Cambridge University Press, 1976, p. 17.

[46] Francoise Choay, "Urbanism and Semiology" in Meaning in Architecture, ed. C. Jencks and George Baird. London: Barrie and Jenkins, 1970.

She views the urban environment as a semiological system and as such she argues that it can be studied using the methods of general linguistics. This could help in eliminating pseudo-problems from the real and the more current problems of city planning. It can help define the problem in context of the kind and amount of knowledge necessary to resolve it.

Wittgenstein (1889-1951), maintained that language was only one form of culture, and that it helped shape our perception of what reality is all about. It has its own rules of behaviour (grammatical rules Wittgenstein maintained were similar to rules of behaviour) and cultural identity. The meaning of a word is therefore in its use and there can be as many languages as there are forms of behaviour. All truths of logic according to Wittgenstein are tautological, wherein the contradiction is self-contradictory in that they are analytical. The most important characteristic of a proposition, according to Wittgenstein, is that it can be either true or false. It is true only if it exists in the real world and if it can be empirically verified. Language is a picture of facts and not of things since the world represents a totality of facts and not of things. The study of meaning thus becomes more important than the study of truth since meaning is attributed to facts and not to truth. It is like a "language game" where in, the use of language is subjected to certain rules that must be observed and certain restrictions within which the game

can be played.[47]

We must also recognize the fact that the logic of rationality - the classical paradigm of knowledge used in planning - is determined and constrained by the capacity of grammar and language, which provide the framework for our thinking and reasoning activity. It needs reason for its justification. What we are looking for, therefore, is not grammar or vocabulary but syntax - that is the way in which images or thoughts are constructed in our mind, and the way in which we interpret problems and create solutions. Mind is a system of organizing principles according to Chomsky.

> "Historically, symbolic logic has, in part, arisen through philosophers', gradual discovery, that the syntactic structures of language reflect only imperfectly or indirectly the underlying structures of meaning. Logicians have, therefore, seen an advantage in abandoning ordinary language in favour of an artificial mathematical notation or 'calculus' which bears the same sort of relationship to speech and thinking, as the language of arithmetic and algebra bears to ordinary English utterances about numbers".[48]

Logic is very much a constructed language, purpose made, and is amenable only to a fixed mode of thought or structure. According to Henri Bergson, logic is simply a convenient technique for dealing with experience. It cannot describe reality in totality. The basic difference between ordinary language (semantic structure) and the more formal-

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[47] See L. Wittgenstein, Tractatus Logico-Philosophicus. London: Routledge and Kegan Paul. 1961.

[48] Geoffrey Leech, Semantics. Harmondsworth Penguin Books, 1976, p. 157.

ized language of the logician (syntactic structure) is that the former has the greater ability to describe reality which comes closest to truth. Leech suggests that they each represent a distinct level of representation. The objective of both modes of expression is indeed to describe the reality as well as possible. While the syntactic structure attempts to order our perception of reality in formal logical sense, the semantic structure attempts simply to describe the perception.[49] Language says Chafe is a "system which mediates, in a highly complex way, between the universe of meaning and the universe of sound".[50]

Structuralist like Levi-Strauss in Anthropology and Chomsky in Linguistics maintain that in order to understand an idea or cultural phenomena, it is important first to understand the underlying structures (deep structures as Chomsky calls them) that might not always be directly observable. It is also important to study these ideas, they argue, in their own terms, devoid of any conventional presuppositions or meanings that are imputed to them and are generally derived from other cultures and beliefs. Such an approach the Structuralist maintain helps unmask any false meanings and begins to give new awareness and new insights into their real nature and to the processes that affect our living environment. Structuralism emphasizes form over content, ho-

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[49] Geoffrey Leech, op.cit. p. 201.

[50] Wallace Chafe, Meaning and the Structure of Language. Chicago: University of Chicago Press, 1970, p. 15.

lism over reductionism and underlying ideas over surface structures.

In city planning, the role of language and the understanding of the structures is very important. They help shape planners' perception of reality, and define planning problems, since recognizing and defining planning problems is as important as solving them. Furthermore, the kinds of solutions one posits are also a function of the language in which the problem is defined and how close that definition reflects reality. What is suggested is that the kind of language one uses, whether "semantic" or "syntactic" will in the end set the parameters for problem definition and solution. But what is important at least in city planning problems is not only the logical understanding in syntactic structure of "how" and "why", but more importantly the "what" of things. What is it that constitutes the problem?. It is the definition of the problem that is critical.

To know 'what' of things is as important as to know the 'how' of things. It is important in other words to understand the meaning of things as much or more than simply the workings of things or how things work. Phenomenologists argued the need for experiencing, for constructing a belief, based on direct experience. Edmund Husserl (1859-1938) who first expounded the theory of phenomenology, defined phenomenology as an interest in those things that can be directly experienced by our senses, and distinguished between natural

sciences and human or social sciences. Natural sciences, he maintained, can only deal with the science of the mind, since mind is a construct of "meaning" and meaning can only be understood subjectively. To understand human or social sciences, he argued, we need to understand human behaviour and in order to understand human behaviour, we need to understand its meaning. Essentially, the theory of phenomenology maintains that all knowledge is socially determined, and peoples' beliefs and behaviours are based on taken-for-granted assumptions about reality.[51]

Both Structuralism and Phenomenological theories open new vistas and presents a new methodology, a methodology that is devoid of preconceived images or ideas. It puts our traditional imaginations of the world in brackets to use Husserl's phrase, and allows us to relearn to look at the world, to generate new and genuine images rather than mere repetitions of our past experiences. As Merleau-Ponty described the phenomenological experience as an experience in which "perspectives blend, perceptions confirm each other and a meaning emerges".[52]

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[51] See Peter Berger and Thomas Luckmann, The Social Construction of Reality. New York: Doubleday Books, 1966.

[52] See Maurice Merleau-Ponty, Phenomenology of Perception. London: Routledge and Kegan Paul, 1962.

Chapter III

THEORIES AND STYLES OF PLANNING

"The art of progress is to preserve order amid change, and to preserve change amid order."

A.N. Whitehead.

3.1 INTRODUCTION

To date, debate on planning theories, has centered around the distinction generally made between "theories for or of planning" and "theories in planning". The former are considered to be procedural or functional theories, dealing with the methodological aspects and are applied and descriptive in nature. They generally addressed the "IS" aspects of planning activity,- specifically, what planners do. The latter theories, that is, "theories in planning", are considered to be normative in nature, dealing with values and ethical concerns of prescriptive planning. They generally address the "Ought" aspects of planning activity, essentially what planners ought to do.[1]

[1] For a detailed explanation see B. Harris, "The Limits of Science and Humanism". JAIP., Vol. 23, 1967. pp. 324-325. H.C. Hightower. "Planning Theory in Contemporary Professional Planning Education." JAIP., Vol. 35, 1969, pp. 326-329; and A. Faludi. "The teaching of Planning Theory", Conference at Oxford Polytechnic. Journal of Royal

Likewise distinction is made between theories that explain a phenomenon or conduct, and theories that describe a situation or a problem. But such distinctions are of little use in dealing with planning issues. At best, they help categorize or classify the activity in which planning engages: the means and ends, the goals and objectives of planning, and the means of achieving them. But before attempting a discourse on planning theories, it is best to gain an understanding of what theories are and what their purpose is.

Theory represents an abstraction of reality as it is perceived. It is an explanation of a phenomenon, a body of principles or propositions. A theory provides a point of reference, a guide to our thinking, a context to relate and organize knowledge in the field, and an organizing format which facilitates testing and validating our knowledge. Theories help formulate problems and assist in searching for relevant information.

Brown distinguishes between three kinds of theories. The first is based on the colloquial understanding of theory as a proposition or explanation of a phenomenon which is untested and as such carries very little validity. The second is based on principles or rules or propositions derived from observations empirically tested, and which explain physical phenomenon. These formal theories in turn can be subdivided

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Town Planning Institute. Vol. 58, 1972, pp. 228-229.

into two categories, one constitutes the construction of calculi which can be transformed into empirical theories and the other consists of empiricial theories which are sufficiently developed to admit formalization. The third kind of theory is one used in the context of sets of procedural rules or principles of classifications and have no explanatory power.[2] These represent the methodological and procedural theories designed essentially to answer the question of 'how' rather than the question 'what'. It is in the procedural - the 'how' theories - that planning has made most progress, although perhaps at the expense of the more needed normative theories.

In discussing the difference between theories in the physical sciences and theories in the social sciences, Rappaport advances the following arguments:

> "The trouble is that whereas a Newton could begin with intuitively evident quantities (length as measured by sticks, time as measured by clocks, force as felt in the muscles), the social scientist cannot make such a beginning. The stuff from which human relations and social structures are made is not evident intuitively. It must somehow be distilled, or abstracted from innumerable 'events' and the selection of these events depends to a great extent on one's experiences, cultural background and biases..."[3]

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[2] Robert Brown Explanation in Social Science. Chicago: Aldine Publishing Co., 1973, pp. 265-293.

[3] A. Rappaport, "Uses and Limitations of Mathematical Models in Social Science", L. Gross, ed., Symposium on Sociological Theory. New York: Harper and Row. 1954. p. 351.

Distinction must also be made between what is called 'general statements' and 'theories' as well as 'theory' and 'practice'. Gibson suggests that such distinction is very important in social inquiry. In social sciences, Gibson contends theories constitute a series of general statements all interdependent.

> "Any given statement can usually be deduced from some combination of others, and if it itself is taken in combination with others there are usually further statements which can be deduced from it. Because of these ramifications we often find that we have at our disposal not single statements, but sets or systems of statements logically interconnected in various complex ways. Such systems of general statements are commonly spoken of as 'theories'."

He clarifies the point further in a footnote "Any general statements and in particular any law, may be called a theory, in opposition to statements about particular things and events, which are said to state facts".[4] According to Gibson the aim of the social scientist when perceived in theoretical and practical context is not only to help explain a phenomenon but also to produce changes. Thus theories in the social sciences, he contends, must meet these two basic requirements.[5] This is analogous to planning intentions, which, as stated earlier, are not only to help explain; but more importantly, are to help solve problems and direct change. Theory needs to be descriptively realistic,

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[4] Quentin Gibson, The Logic of Social Enquiry. London: Routledge and Kegan Paul, 1960, pp. 113-114.

[5] Quentin Gibson, op.cit. 1960, pp. 197-198.

and be a sufficiently good aproximation of the problem at hand.

The principal aim of planning theories however should be to construct general propositions or hypotheses which can serve as instruments for the systematic explanation of urban phenomenon and resolution of urban problems. In other words, planning theories must not only have explanatory and predictive powers, but as Popper states they must also be understood by others (even though not necessarily accepted), and they must be theories that can lead to action. Most importantly planning theories must also reflect reality more in its purpose than in the mere causal relationships. Whether all these criterion can be satisfied by planning theories or need be satisfied or whether such all-encompassing theories are even possible, are some of the questions that need to be resolved.

3.2 RATIONAL COMPREHENSIVE PLANNING

3.2.1 RATIONAL PLANNING

The term rational is derived from the Latin "ratio" meaning reason.It is a movement of ideas that pursues solutions to problems through a priori reasoning process. It was believed particularly by the 18th., century Enlightenment scholars that through this scientific inquiry and education, indeed human happiness could be increased. Distinction needs to be made however between "rationalism" and "empiri-

cism". The former uses the powers of reason while the later depends on experience. It is the combination of both these schools of thought that provided the basis for the "Rational Planning Model.

The Rational Planning Model is the most commonly used planning model, and is also known as the Rational Comprehensive Planning or the Master Plan Model.

Lindblom maintains that the classical model of rational decision-making follows a rigidly prescribed pattern. A rational man first identifies and defines his goals and values. He then organizes and ranks them in his mind and lists all the possible ways for achieving his goals. He examines all the important consequences that would follow from each of the alternative means and compares the consequences and selects the best alternative for achieving his goals.[6] It is rational and comprehensive at least in intent and assumes an optimal solution or decision to a problem.

The theory of rational planning is based essentially on the premise of Instrumentalism (Dewey, Popper), which states that theories are only means or instruments in problem-solving and directing social change. In city planning it came to be known as the Rational Comprehensive Planning method, meaning pursuit of means towards an end in a rational idiom. It is an instrument of calculation and of pre-

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[6] C.E.Lindblom, The Policy-Making Process, Englewood Cliffs, New Jersey: Prentice-Hall Inc., 1968, pp. 12-14.

diction used only to solve a given problem. Its validity lies in its utility and not in its ability to explain reality. It may, in fact, say nothing of reality. It assumes the positivist attitude and as such rejects any variables dealing with values.

Max Weber (1864-1920) and Karl Mannheim (1893-1947)[7] the two great social philosophers, were the most influential proponents of rational planning, and its earliest exponents. Weber distinguished between 'value' and 'material' rationality, while Mannheim made similar distinctions between 'substantial' and 'functional' rationality. The substantial rationality which is akin to Weber's value rationality is directed at rational (intelligent) pursuit of societal 'goals', while the functional rationality or material rationality is directed at rational pursuit of 'means' to achieve given ends or goals.

But how one goes about determining societal goals is not clear either in Weber's or Mannheim's writings. They both use global and instrumental models that are methodologically adequate but lack theoretical specificity. They meet the rigour of scientific enquiry but not the relevance in dealing with the issues of planning particularly in an urban context. Societal goals are indeed complex to identi-

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[7] See Max Weber, The Theory of Social and Economic Organization. New York: The Free Press, 1947, see also Karl Mannheim, Man and Society in an Age of Reconstruction New York: Harcourt Press, 1942.

fy or define, and almost impossible to quantify, since they are normative in nature. They are couched in such abstract terms as freedom, equity, happiness, and are all value-laden and incapable of quantification through the rational mode of thought.

Some of the other earliest proponents of rational planning,[8] who enunciated theories in the area of social planning and social reconstruction, were: Herbert Simon, Martin Meyerson, Edward Banfield and Jan Tinbergen. Simon (1945) contributed to the area of decision making and administrative behaviour, Meyerson and Banfield (1955) to the field of physical planning and Jan Tinbergen (1964) to the area of economic planning. Each of these Rationalists emphasized means over the ends, and believed in human rationality in resolving societal problems. They all believed that the rational mind, devoid of bias could organize and plan for social needs and change.

The Rational Comprehensive Model dominated and continues to dominate planning thought - whether in seeking means or in identifying goals, or both. It appeals to planners, because it claims objectivity and in its approach it is more akin to human perception - which is generally a synoptic perception, perceiving things as wholes better than as parts.

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[8] Chester Barnard (1938), is considered the earliest proponent of rational theory of decision making.

The Comprehensive Model assumes a single hierarchy of values, and is based on a strong premise that comprehensiveness or a synoptic perspective is desirable and in fact feasible. It pursues single means towards a multiplicity of goals that supposedly reflect the unitary public interest and holds that they can be ranked by order of importance or preference. It is centralist in its approach and indeed very elitist, in trying to reconcile the pluralistic nature of society through the imposition of elite class interests and values, as imperatives.

Recognizing human limitations, variations to the Rational Comprehensive Models were put forward by Herbert Simon in his later modified work, which he called "Bounded Rationality" and further variations called "Instrumental Rationality".[9] In essence, the difference was between those that advocated the 'maximizing' of utility function, and those that advocated the 'satisficing'of the utility function. The utility maximizers were of the belief that 'optimum' situations were possible and that in fact all knowledge could be brought to bear in a rational and comprehensive manner to seek the optimum or the best solution. This position was counteracted by those who argued that such an optimum solution was impossible and that at best one could achieve a satisficing level. March and Simon (1958)[10] pro-

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[9] See Herbert Simon, Administrative Behaviour. New York: Collier-Macmillan Ltd., 1965.

[10] J.G.March and H.A.Simon, Organizations. New York: John

posed the alternative "Satisficing Rationality Model" in which the criterion of satisficing replaced the optimizing requirements of the classical rational model. In other words the satisficing model attempts to replace the goals of "maximizing" with the goals of "satisficing" and seeks a course of action that is 'good enough'.

All these theories of course have their limitations. However one can argue that it is not possible to obtain perfect information given the nature of constant change, or all the information, necessary to make best decision. There is also the question of man's capacity to absorb and effectively utilize the myriad of information that is often collected in the name of comprehensiveness. Most importantly there is the question of whether it is possible to even specify the rational means to desired goals.

The logical rigidity of the model precludes recognition of uncertainties inherent in many of the variables. As well, it precludes incorporation of factors that cannot be accounted for or accomodated within the logical construct of Rationality. Whether one defines the 'best' course of action that the rational decision purports to arrive at, as being high in the preference scale, or if it is simply logically expedient as one of the many choices with least negative impacts needs to be clearly specified and understood. Rationality cannot fully assist in judging the various cri-

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Wiley & Sons, 1958. pp.169-182.

teria for the decision, and, lacking purpose, it simply becomes an objective instrument, for decision making. In sum its main concern is in the process rather than in the purpose or the 'end result'.

A strong argument against the synoptic or comprehensive perspective came from Meyerson and Banfield (1955). They argued that although "comprehensiveness" as an ideal is still important, one could not ignore the high costs involved in information gathering for any comprehensive, analytical strategy. Besides they argued that it is not always even worth the costs, and as such one should at best try to be only "as comprehensive as possible".[11]

The "Bounded Rationality" model in essence attempts to maximize the very limitations it imposes, that is it recognizes rationality as bounded in as much as neither all the alternatives nor all the consequences can be considered and as such it cannot be either, fully rational nor totally comprehensive. It perceives the planning process as principally a systematic synthesizing function. It recognizes the tripartite division into social, economic and physical planning. The task of planning is to synthesize policies of the various authorities, both public and private in seeking desired changes.

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[11] See Martin Meyerson and Edward Banfield, Politics Planning and Public Interest. New York: The Free Press, 1955.

Simon discusses Bounded Rationality as the inherent limited capacity of the human mind to conceptualize. He states it as:

> "The capacity of the human mind for formulating and solving complex problems is very small compared with the size of the problem whose solution is required for objectively rational behaviour in the real world - or even for a reasonable approximation to such objective rationality."[12]

The emphasis here is slightly different, it is on the selection of the alternatives, and the advocating of the choice of the first 'satisfactory' alternative as the preferred 'alternative' or preferred rational choice.

"Instrumental Rationality", on the other hand attempts to relate more to real-world situations. It seeks to pursue generally a single goal through a multiplicity of means or through an open selection of "best means". Depending on the nature of the problem, the selection of means and their interrelationship could either follow an objective scientific approach (objective instrumental rationality) or a subjective approach (subjective/instrumental rationality), wherein an attempt is made to incorporate the normative values that could influence decision-making.

Dahl and Lindblom (1953) rejected these models in favour of a modified version that would reflect practice more accurately. They had earlier introduced the idea of

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[12] H. Simon, Models of Man. New York: John Wiley @ Sons Inc., 1967. p. 198.

"Incrementalism" in their book "Politics, Economics and Welfare". Although it was not fully developed at the time, it did question the plausibility of making decisions through purely rational method. The reality of decision-making whether in social, economic or political fields they argued, did not conform to the dictums of rationality. Decisions were in fact made "incrementally".[13]

Similar arguments were put forward earlier by Karl Popper (1945). Recognizing the limitations of the human mind, the instrumental nature of inquiry, and given the nature of complexity of the problems, Popper argued in favour of piece-meal social engineering, a piecemeal approach to reform rather than any radical transformation.[14] Braybrooke and Lindblom contended that the Rational Model in its pure form was both untenable and unrealistic. It was incapable of accommodating any value preferences, and most importantly, it did not account for its implementability, nor reflect the reality of the decision-making process. In a later book A Strategy of Decision (1963), they proposed a model which purports to represent the decision making process as it actually occurs. The strategy of "Disjointed-Incrementalism" proposed therein came to be known as the art of "Muddling Through" or "Incrementalism".[15]

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[13] See R.A.Dahl and C.E.Lindblom, Politics, Economics and Welfare. New York: Harper and Row Publishing, 1953.

[14] See Karl Popper, The Open Society and Its Enemies. Vol.1. London: Routledge and Keegan Paul, 1962.

Lindblom argued that because of wide variations in human values, it would be hard to reach an agreement in defining either the ends or the means in a way that would be acceptable to all. Simply aggregating values, generating value consensus or positing a single value system is avoiding the problem. Facts and values he said were interrelated, wherein values and policies are in reality determined at the same time. Under incremental planning according to Lindblom, plans are made by a combination of "intuition, experience, rule of thumb, various techniques (rarely sophisticated) and endless series of consultations".[16]

The process of "Muddling-Through" is an on-going process, they argue, of reacting to a set of immediate problems and is held to be more realistic than attempting to pursue some long-range unattainable goal. It is easier to achieve consensus and deal with a limited number of alternatives, and consider only those alternatives that differ marginally from current policies. It is directed at solving immediate problems in an incremental manner. Thus change, being marginal, is more easily realized and monitored.

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[15] David Braybrooke and Charles Lindblom, A Strategy of Decision. New York: The Free Press, 1970. See also Charles E. Lindblom. "The Science of 'Muddling Through'". Public Administration Review, Vol. 19, Spring, 1959. pp. 79-88.

[16] See Charles Lindblom, op cit. 1959.

The fragmented nature or disjointedness of Incrementalism comes from the decision-making process it advocates and the division of tasks that it recognizes. Policy-making and analysis are undertaken by different groups, thus preventing centralized control or the imposition of a centralist value framework. Lindblom suggests that this disjointedness introduces freshness and distinctiveness and the different facets of the problem can be exposed and highlighted more advantageously.

There is less importance in identifying values explicitly but rather the emphasis is that the decision reflect stated policy or be in accord with it. The means and goals are considered simultaneously, and the goals are dependent upon the means available. One of the most important characteristics of Incrementalism is indeed its incremental nature. The intent is not to reach a long-range goal but to seek small changes as situations dictate and thus "incrementally" to achieve the stated objectives. The goal is re-evaluated at each stage to assess its realization. Only those alternatives considered feasible are evaluated and selected. The three important characteristics of the Incremental model are:

1. the incremental nature of the changes and policies that are desired,
2. the acceptance of agreement as a criterion of quality, and

3. the maximization of the guarantee of achieving desired changes or conversely reducing risks through "successive limited comparisons".

Incrementalism is, no doubt, an ad-hoc remedial approach: it makes no pretence of either maximizing goals or seeking an optimum situation. It is principally concerned with removing the ills and constraints that hinder the achievement of the stated goal. Accordingly it strongly relies on precedents and is dependent, for guidelines, on past successes, failures and limitations in predicting the future. It is limited hence, to problems where past policy or experience exists as a guide. Incrementalism nevertheless claims some success in its attempt to meet the needs of a stable society. It, however, represents a rather conservative and cautious attitude towards social change, advocating the 'status quo', rather than radical action. Lindblom contends that the incremental model is very compatible with democratic policies as politics attempts to achieve change through small steps, rather than by upsetting the status quo. Incrementalism is characterized by its functional rationality as compared to the substantive rationality of the Rational Comprehensive Model.

Etzioni in an article entitled "Mixed-Scanning" (1967) put forward an alternative theory that attempted to combine the Rational and the Incremental models. In doing so he tried to integrate the positive aspects of both while

minimizing the restrictive nature inherent in each. He tried to avoid the rigidity of the synoptic utopian constructs of the Rational Model and the more constrictive perspective of the Incremental Model particularly its conservative, limited approach. Thus, he puts forward two levels of decision-making - a higher level which seeks a more synoptic rational view of major changes, a kind of "meta-planning", and a lower level dealing in more day-to-day incremental changes. He attempts to distinguish between fundamental decisions and incremental decisions. The fundamental decisions are goal oriented and give the overall direction, while the incremental decisions, although derived from fundamental decisions. are more specific and problem oriented.[17] A third model put forward by Dror[18] was "A Normative Optimum Model for Policy Making", and was based on a series of assumptions. Optimum policy making he argues involves maximizing

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[17] Amitai Etzioni, "Mixed Scanning". Public Administration Review, Vol. XXVII. No. 5, Dec., 1967. pp. 385-392. See also Amitai Etzioni. The Active Society. London: Collier-Macmillan, 1968.

[18] Yehezkel Dror, in his article "The Planning Process: A Facet Design". International Review of Administrative Sciences. Vol. 29, No. 1, 1963, pp.46-58, had also put forward the Facet Design model, where he attempts at examination of the various components or Facets of the Plan as being of greater importance than merely looking at objectives and purposes of the plan. Both the Optimal Model and the Facet Design were attempts at accomodating the rational and the extrarational processes. The four Facets of design are 1. The planning environment, the kinds of information; 2. The subject matter of the plan; 3. The planning unit and 4. The form of the plan. See his article "Muddling Through - Science of Inertia?. Public Administration Review, Vol. 24, 1964. No. 3, Sept., pp. 153-157.

rationality so that a better explication of goals, values and objectives is achieved.

It would appear that inherent in rational planning models is the assumption that planning is a technical exercise geared either at rational selection of means or rational identification of ends. It also assumes that planning problems can be conceived in terms of a comprehensive model and analyzed and resolved accordingly. It sees planning as an allocative process and the role of the planner as a passive advisor performing a function, rather than as an advisor or innovator of change, politically engaged in plan development and implementation.

3.2.2 COMPREHENSIVE PLANNING

The terms Comprehensive Plan or Master Plan conjures an image of grand design and utopian visions. In planning it became a magic word that conscripted the entire planning discipline, to the extent of becoming synonymous with the word planning itself. For well over four decades it monopolized planning activity. It was first used according to Bassett in a document published in 1926 called "Recent New York Legislation for the Planning of Unbuilt Areas, Regional Plan for New York and Environs". Two of the earliest exponents of comprehensive planning were Frederick Law Olmstead and Alfred Bettman who defined it as "A City Plan is a Mas-

ter Design for the physical development of the city".[19]

The term Comprehensive Planning has since appeared in a number of Planning Acts and Enabling Legislations, one of the earliest being "A Standard City Planning Enabling Act, published by U.S. Department of Commerce, in 1928. It defined the comprehensive plan, perhaps most vividly as:

> "...The plan shall be made with the general purpose of guiding and accomplishing a coordinated, adjusted and harmonious development of the municipality and its environs which will, in accordance with present and future needs, best promote health, safety, morals, order, convenience, prosperity and general welfare, as well as efficiency and economy in the process of development; including among other things, adequate provisions for light and air, the promotion of the healthful and convenient distribution of population, the promotion of good civic design and arrangement, wise and efficient expenditure of public funds and the adequate provision of public utilities and other public requirements".

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[19] Proceedings of the Third National Conference on City Planning, Philadelphia, Pa. May 15 to 17, 1911. Boston 1911, pp. 12-13. Olmstead (1822-1903), was perhaps the first to enunciate the concept of the plan "as a devise or piece of...machinery for preparing and keeping constantly up to date, a unified forecast and definition of all the important changes additions, and extensions of the physical equipment and arrangement of the city which a sound judgement holds likely to become desirable and practicable in the course of time, so as to avoid so far as possible both ignorantly wasteful action and ignorantly wasteful inaction in the control of the city's physical growth". See also Alfred Bettman's definition in "Planning Problems of Town, City, and Region. Papers and Discussions of the Twentieth National Conference on City Planning, held at Dallas and Fort Worth, Texas, May 7 to 10, 1928. Philadelphia: William F. Fill Co., 1928, p. 142. Both these sources are quoted in Alan Black, "The Comprehensive Plan" in Principles and Practice of Urban Planning, ed William I. Goodman and Eric C. Freund. Washington, D.C. International City Managers Association, 1968, pp. 349-378; and Edward M. Bassett. The Master Plan: With a Discussion of the Theory of Community Land Planning Legislation, New York: Russell Sage Foundation,

Farbman after having examined several hundred Master Plans in the U.S.A. maintained that essentially they contained the following:

1. a general description of the study area
2. demographic characteristics
3. land use
4. circulation Patterns
5. public Facilities and Services
6. public Utilities
7. designated Areas for Special projects
8. housing
9. implementation

The emphasis was on the comprehensive physical plan that could integrate the above mentioned considerations into a Master Plan. It was a fusion, Farbman suggests between the tenets of the City Beautiful, the Public Works Program and Zoning that created the Comprehensive Plan - it was a vehicle for communicating these ideas interrelatedly.[20]

Two characteristics of the comprehensive plan approach emerged: a) the belief that the future is simply an extrapolation of the present and b) the belief that comprehensiveness is attainable. Grounded in Utilitarian dictum,

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1938.

[20] David Farbman, "A Description Analysis and Critique of the Master Plan", prepared for Institute for Urban Studies, University of Pennsylvania, 1959-60.

the comprehensive planning movement sought its legitimate role in the political arena, as an instrument that enunciated the grand goals of public good, rationaly and efficiently achieved. It is to the utilitarians says David Eversley that "we owe the true origins of modern planning", both its supposed rationality and comprehensiveness.[21]

Friedmann[22] argues against the concept of comprehensive planning as being both restrictive and simplistic. The points he makes are as follows:

1. The value frame and interest delineating objectives tend to be very restrictive to a given social matrix;
2. It tends to express a single perspective-supposedly a concensus point - that incorporates a multiplicity of values and goals of a pluralistic society;
3. The restrictive nature of comprehensive planning precludes dealing with conditions of uncertainties or external influences;
4. It is basically impossible to amass all the pertinent information, present or past, to deal with planning problems either comprehensively or futuristically. It is indeed beyond human capacity;

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[21] David Eversley, The Planner in Society. London: Faber @ Faber, 1973, p. 47.

[22] John Friedmann, "The Future of Comprehensive Urban Planning: A Critique" in Public Administration Review No. 3, May/June 1971, "Symposium on Changing Styles of Planning in Post Industrial America, pp. 315-326.

5. It is a centralist model that purports to reflect the public interest;
6. It assumes a balanced development, implying some drastic institutional changes and monitoring mechanisms, and thus restricting any long range planning.

Friedmann contends that "the logic of comprehensive planning is inconsistent with the imperatives for action". The pursuits of comprehensive planning tend to be focussed on limited objectives - often of the ruling class - and very much directed at mobilizing and utilizing limited resources. It is an opportunistic model dependent on availability of immediate resources and or coalitions that can be set up to accomplish the immediate objectives.

It is important to realize that such planning tends to advance primarily the interests of the ruling elite and the profession per se, but does not necessarily work toward the public good.

Realizing the short-comings of the Comprehensive Planning Model, a "Process Model" evolved. In essence, it was simply a change in emphasis. Instead of concentrating on a blue print or master plan as an end product, more consideration was given to the process of developing the plan, including public participation. Process Planning likewise suffered some set-backs. In eagerness to rectify some of the shortcomings of the Master Plan approach, the proponents

of the Process Model themselves fell into pitfalls. The avowed interest in the means and the administration of the means conflicted with the recognition of public interest and plural interests. Fagin noted that

> "This notion of mediation among different interest groups rather than service to an abstraction called public interest squarely recognizes and addresses the fact of cultural, social and economic diversity among people and the perpetual presence of validly particular interests".[23]

One of the main limitations of the process planning emerges from lack of specific long range direction - the end is left vague and undefined. This emanates in part from the fact that the objectives of interest groups are hard to reconcile in either identifying or defining the problem and thus agreeing to any given solution. Likewise the time lag that process-oriented planning can cause, mitigates against efficient solutions. This time lag is additive in nature and expands both in information base and in strategies that can often lead to frustration and non-implementation. Costs likewise tend to escalate due to long-range directions.

It must also be recognized that not all planning problems are amenable to a process approach; some can be better resolved by a blueprint approach, a point in case is transportation network planning. The method also lacks the holistic view that comprehensive planning purports to pres-

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[23] Henry Fagin, "Advancing the State of the Art" in Urban Planning in Transition. ed., Ernest Erber. New York: Grossman Publishers, 1970, pp. 125-141.

ent rather than the atomistic approach that process planning engenders.

The comprehensive and the process approach have one thing in common - both see the future as an extrapolation or extension of the present albeit a more orderly and tidier version. Both see planning as a centralist activity of a technical nature.[24]

3.3 PLANNING AND DETERMINISM

3.3.1 DESIGN DETERMINISM

In order to understand the theoretical basis of planning, it is pertinent to examine the school of thought called "Design Determinism" that has strongly influenced planning in its early stages.

The idea that human nature could be interpreted and that it behaves according to the laws of nature is almost as old as philosophy. The Epicurians believed in atomism of human nature, that everything is composed of matter, of impenetrable atoms. This they argued was also true of human thoughts and desires, and that all these behaved according

[24] Martin Meyerson in an article "Building the Middle-Range Bridge for Comprehensive Planning" (1956) proposed a complementary model to Comprehensive Planning. He identifies five functions as pertinent to planning and they are: 1) a central intelligence function; 2) a pulse taking function; 3) a policy clarification function; 4) a detailed development function and 5) a feedback review function. These are designed to bring planning and policy closer together and make planning more effective and responsible.

to the motions of atoms. It stands to reason, they argued, that human nature can therefore be understood and in fact moulded following the laws of physical bodies.[25]

Hobbes likewise maintained that human nature was akin in behaviour to physical sciences and could therefore be subjected to the laws of nature and be determined. Such beliefs were manifested in planning, and physical determinism meant planning according to the rigid canons of science more specifically of geometry. This gave rise to the so called design determinism that Renaissance planners and architects fostered. Such a causal model became central to planning.

The period 1870-1913 was the most remarkable period for economic growth and planning in both Europe and North America. It was a period of great industrialization and urbanization, and the pressures upon the city and the city as the metaphor of civilization represented a very powerful force in arts, sciences, technology, architecture and planning. This transformation in planning followed three directions:

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[25] See Lucretius, De Rerum Natura. Trans., R.E.Latham, and see also T. Hobbes On Human Nature. Harmondsworth: Penguin Books, 1951. Lucretius (c.99-55 BC.) believed in chance, and as such could not be considered as strictly mechanistic. It should be noted that Democritus (c.420 B.C.) was one of the earliest atomic theorists.

1. The remedial approach that sought to correct the ills in an ad hoc basis, seeking to create an efficient and healthy urban environment.
2. The escapist approach that sought to recreate the city in an utopian idealism.
3. The physical design approach that equated beauty with liveability.

The most dominant and manifest of the three was the third - often called Physical Determinism or Design Determinism. This particular belief became a panacea for the myriads of urban problems in a society that was rapidly changing under the impact of technological forces, economic growth and political tensions. It called for new forms, new language and great idealism; - utopian dreams were commonplace, all designed in geometric patterns creating ideal cities, analagous to beautiful, thus liveable cities. This attitude of exploration and innovation was common in almost all fields. This included for example: sociology, Weber (1903), Mannheim (1929); art, Cezanne, Matisse, Klee, Picasso; psychology, Freud (1895); science, Einstein (1905), and literature Checkov (1896), Proust (1905), Hesse (1914), James Joyce (1914), Ezra Pound, (1915), Kafka (1946), D.H. Lawrence (1976), and many others. Art and aesthetics provided the focus and the medium for the realization of these ideas.

In the Symposium for example, Plato postulates that a man who loves beauty progresses sequentially from beauty of form to beauty of ideas, to beauty of institutions, laws, and finally to beauty itself. Beauty thus becomes the highest good - an embodiment of truth, as stated by St. Thomas Aquinas. Diderot in his treatise on the "The Beautiful" (1752) contends that a thing is beautiful because of the real relations discerned in it; real relations he says that are actually there and which our imaginations can in fact discern. St. Augustine in a much earlier treatise on beauty, expressed his notion of beauty as unity of parts; - "omnis porro pulchritudinis forma, unitas est", meaning that the form of all beauty is in the unity. The exact or perfect interconnections of parts within a whole that renders it as one unity, is what constitutes beauty. In "Greater Hippias", Plato also disscussed the idea of beauty which he maintained was identical with the pleasures of sight and hearing.

Francis Hutcheson (1694-1746) in Inquiry Concerning Beauty (1725), talks about uniformity amidst variety that is the essence of beauty. There is vast uniformity in nature he suggests, amidst almost equally infinite variety. George Santayana (1863-1952) states that "We know from excellent authority that beauty is truth, that it is the expression of the ideal, the symbol of divine perfection, and the sensible

manifestation of the good."[26]

Camus in his book The Myth of Sisyphus, observed that art is the essence of life "Man cannot do without beauty", he said.[27] John Dewey regarded art as the unifying force, and Albrecht Durer noted that "For, verily, art is inherent in nature; he who can extract it therefrom will hold it". The period represented 'la belle epoque'.

Planning too indulged in beautiful utopias, devoid of realities. This was, of course, not new. Plato (c.427-347 B.C.) in his utopia The Republic emphasized the influence of the beauty in nature and the environment in shaping human minds.

> "Our artists and craftsmen must be capable of perceiving the real nature of what is beautiful, and then our young men, living as it were in a good climate, will benefit because all the works of art they see and hear, influence them for good, like the breezes from some healthy country, insensibly moulding them into sympathy and conformity with what is rational and right."[28]

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[26] George Santayana, The Sense of Beauty. New York: Dover Publications 1955. pp.14-52. It is also interesting to note that the term "aesthetics" is of rather recent origin having been coined by Alexander Baumgarten, in his Meditations published in 1735. See also Karl Aschenbrenner and Arnold Isenberg. Aesthetic Theories. New Jersey: Prentice-Hall, 1965.

[27] Albert Camus, The Myth of Sisyphus. Harmondsworth: Penguin Books, 1980. p. 137.

[28] Plato, The Republic, Part III. Trans. H.D.P.Lee. Harmondsworth: Penguin Books, 1971. p. 142.

He argued that art was morally uplifting and conducive to a happy living environment. It is also interesting to note that Plato banishes the artist in his Republic because art per se was immoral - it was not able to capture reality - since reality was transcendent perfection. Aristotle likewise emphasized the aesthetics, the beauty of the city in terms of order and organization, as well as security, as a positive consideration in city design.

The World's Columbian Exposition (1893) was the turning point. It ushered the so called City Beautiful Movement and gave Physical Determinism its first coherent definition. The movement that lasted a little more than a decade was, in a way, an outcome of the concern for social order, but ended up being simply a recaption of the Renaissance ideas of ordered cities, implanted on American soil. The concept of City Beautiful per se remained very illusive and insubstantial rather than a clear theory that guided the form or morphology of the city any differently from the Renaissance ideals. Even the literature on the subject is very scant, mentioning only the term "City Beautiful Movement" and very little about its constructs.[29]

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[29] The City Beautiful Movement is associated with Daniel H. Burnham who together with Edward H. Bennett prepared the first model of City Beautiful. The first City Beautiful plan was prepared by Burnham and Bennett for the City of Chicago (1906-1908), and was ironically commissioned by the Commercial Club of Chicago, whose interest lay in the more pragmatic aspects of the city, such as functionality, efficiency and utility. See The Plan of Chicago Prepared during the Years MCMVI, MCHVII, and MCMVIII, ed. by Charles Moore. Chicago, Commerical Club, 1909.

An ordered city was believed to be a beautiful city. as well as an efficient city. This was however nothing new in terms of theoretical principles, but simply a return to the tenets of the Rennaisance planning that had originated in Europe at the turn of 18th., century.

The origins of the City Beautiful movement lie not only in the aesthetics but also in an amalgam of landscape tradition, municipal engineering and civic design. The landscape tradition came from Frederick Law Olmstead, whose park designs became essential features of urban design. Parks were considered necessary for public health and general wellbeing, "a place for repose for simple virtues and pleasures". The municipal improvements were mainly an exercise in city beautification, improvement of sanitary and health conditions through improvements of housing, of streets and other utilities. The City Beautiful movement also stimulated a comprehensive approach to city building. The civic design influences manifested themselves in visual and spatial aesthetics in the manner of the Ecole de Beaux-Arts tradition, of grandeur, monumentality and artistic unity.

The White City was simply a microcosm of the City Beautiful, that Burnham postulated and that struck the imagination of those who came to see it. Building a city ipso facto to a pre-established plan, the Master Plan , became the raison d'etre of planning. With the fusion of architecture, landscape architecture together with the influences

from the German Rationalization Movement of the early 1890's, a new lingua in planning emerged. Urban design, comprehensive planning, city efficient and city practical became "ipso facto" the accepted purposes in city planning.

This school of thought maintained that the design of the city could influence if not determine the quality of life of the people living in them. Acceptance of such a belief was quite widespread particularly among planners of the time, whose own educational background was grounded on the principles of aesthetics and design of physical form - architecture, landscape architecture and engineering. There is no doubt that the environment in which people live influences their behaviour. For example slum housing conditions do, in fact, limit social possibilities. But to argue that it, determines human behaviour is perhaps going to the extreme. That ordered cities do in fact create ordered lives is extending the analogy more to fit a purpose, than to understand the real nature of the city.

A number of people have examined these ideas. Jane Jacobs in her book, Death and Life of Great American Cities (1961), contends that order formulates social relations and that urban forms cannot intrinsically be defined as good or bad but as a series of experiences generating diversity of behaviour patterns. She argues that planners have ignored the lessons to be learned from the real life of the city and have instead transposed theories derived in isolation or

from superficial understanding of the city. There is no virtue, Jacobs argues, in making a city orderly, clean or less dense, what a city needs is diversity and more intensive and active development. Common good can occur only if the individuals' opportunities are maximized to seek their individual ends.

Robert Goodman in his book After the Planners (1972), believes that design determinism is an elitist and rather simplistic argument,"a kind of dubious notion under which many of our city design concepts still labour."[30] Architectural unity or consistency Goodman goes on to argue, are not necessarily appropriate models for complex urban life, nor are they consistent with the democratic political process. What is needed, he says, is search for forms that can evolve from people themselves, rather than from the experts - a kind of "Guerrilla Architecture" that can address the real needs of the people.

Sociologist Richard Sennett in Uses of Disorder (1970), contends that two changes are necessary in the structure of the city to transform them into "survival communities" given the present predicament that the large urban centers are increasingly facing; one is to change the bureaucratic structure of the city, and the other is to disregard the notion of order and harmony in favour of freedom

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[30] Robert Goodman, After the Planners. Harmondsworth: Penguin books, 1972, p.139.

for communities to create their own patterns of life and close-knit communities, by recognizing anarchy, diversity and creative disorder. Sennett believes that the desire for order and purified cities, is more from fear of disorder and human diversity, than it is from any altruistic motives. It is possible to argue that design does influence behaviour and that design can bring about desired change in social behaviour, but that would constitute social-engineering.[31]

The theory of City Beautiful, however, saw its ready acceptance by the government because it appealed to the sensitivity of the ruling class bourgeois. As well, it was timely in view of the fact that the urban environment was fast deteriorating and in many cases completely destroyed in the aftermath of the World War II. There was the urgent need to rebuild the cities in a more efficient and functional manner, guided by the strict canons of 'beauty' - geometric order, harmony and scale - to provide civic grandeur, variety and unity.

The Columbian Exposition represented not only economic success but also the triumph of classical capitalism. Given that it ocurred during the Depression, the Exposition, as J.K. Galbraith states in his book The Age of Uncertainty, screened a harsher reality of poverty, slum and unemployment that the city was experiencing. The Fair's success provided

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[31] Richard Sennett, Uses of Disorder. Harmondsworth: Penguin Books, 1973.

the much-needed impetus for city planning. The canons of geometry were the key ingredients in Design Determinism. Both the Euclidian tactile geometry and the visual geometry of perspectives played decisive roles in the design of cities.[32] Truth was equated with Beauty, and beauty was a genre of geometry. The straight edge of the architect and the compass further restricted the creation of urban form to either rectangular, linear or circular designs. The gridiron pattern, so much imitated, epitomized order and aesthetic principles, reflecting as well both hierarchy of uses and efficiency.

The impetus given by the new role of the city, particularly Chicago and New York in North America, as the cultural and artistic centres furthered the aims of aesthetics as a principle of civic design. The art of Modernism that evolved during the last years of the 19th century influenced city design in the way in which it reflected the spirit of the technological society and its pervasive influences on urban living. It sanctioned a new social order based on technique, rationality and efficiency; a new art that could be tooled to precise designs - design that was a product of the machine technique.

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[32] Morris Kline, Mathematics in Western Culture. Harmondsworth: Penguin Books, 1977, p. 189.

The quintescence of the City Beautiful movement, the White City, represented a metaphor of design and order in the grand renaissance scale of avenues, boulevards and fictitious perspectives. City became a machine for living, albeit, a false one. It produced cities that were beautiful perhaps but hardly liveable.

Ortega y Gasset in his book the Dehumanization of Art points out this whole movement as "play" or "delightful fraud" inflicted upon the society in the name of aesthetics.[33] Although it did permeate the consciousness of the time it did very little to hide the harsh realities of the urban phenomenon. Depression, poverty, social anarchy, rapid urbanization, were translated into order, rationality, material well being, efficiency and freedom. Planning assumed a very positive attitude and with a creative force it sought to remedy the ills by imposing some preconceived ideas onto the urban fabric.

To control the development of land and its uses, to contain the abuse of the laissez-faire, some rules and regulations became necessary. Zoning and subdivision regulations were enacted as legal devices that conformed with aesthetic principles of order, segregation, and distribution, as well as for implementing the land use plans. They were a means to delineate urban areas into zones or dis-

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[33] M. Bradbury @ J.McFarlane, Modernism. Harmondsworth: Penguin Books, 1978, pp. 27-28.

tricts based on use, density, lot coverage, and other easement controls. Being legal tools, they had to be precise and definitive in detail.[34] The regulations were to be equitable as well as to portray the essence of the ordered city. It was supposedly designed to safeguard the general welfare of the people by protecting the individuals rights. In reality they turned out to be simply mechanisms for protecting the upper classes, containing urban growth from undesirable encroachments, and above all for enhancing land values. It was rational ordering of societal activity in the final analysis.

Camillo Sitte's (1843-1903), Der Stadte-Bau nach seinen Kunstlerischen Grundsatzen, a work published in 1889, translated as City Planning According to Artistic Principles, was one of the earliest influencial books in urban design aesthetics. Two concepts were put forward: one was aesthetic design with emphasis on visual form, and the other was the experience of living the spaces created in the urban environment through good design. He also conceived the form of the city in rigid geometric design enclosed and organized into public squares and streets following certain artistic principles derived from careful observation of the past, in

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[34] E.Bassett defined zoning as "the regulation by districts under the police power of the height, bulk, and use of buildings; the use of land, and the density of population." This was the basis of the first comprehensive zoning ordinance of 1916: "U.S. Department of Commerce, Advisory Committee on City Planning and Zoning. A Standard City Planning Enabling Act. 1928".

particular medieval and renaissance examples. It was his deterministic view that beautiful cities provided an essential artistic education for the masses. The other equally influential books, were Raymond Unwin's Town planning in Practice: An Introduction to the Art of Designing Cities and Suburbs (1909) which became a standard text in city design, and of a latter vintage Frederick Gibberd's Town Design, (1953).

An important theory that influenced design determinism was the theory that "form follows function", commonly known as the "Theory of Functionalism". Although this theory is not based on any conclusive empirical studies, it does however, have its basis on three strong premises. These premises are the mechanistic analogy, the organic analogy and the moral/ethical analogy[35] The mechanistic analogy is based on the basic principle of functionalism that beautiful form 'per se' evolves from pure function or mechanical and engineering efficiency; the purer or more truthful to the nature of the material and its physical properties, the more beautiful the product - meaning "form follows function". The organic or biological analogy was, on the other hand, based on the evolutionary theory following Darwin's work, Origin of Species (1842).[36] Its guiding principles came from

[35] E.R. de Zurko, Origins of Functionalism. New York: Columbia University Press, 1957. pp. 8-14.

[36] An interesting observation known as Liebig's "Law of Minimum" which suggests that the law of selection and adaptation is reflected by its ability to respond to minimum

the perfection and beauty of nature and from laws that govern nature in its evolutionary process. Progress as we know was intimately connected to the biological notion of evolution. Imitating nature constituted the prime requisite of good design and true design. It progressed by adaptation and selection, that means "function follows form".

The moral or ethical analogy is rather vague in its structure. In essence it suggests that the moral ethical ideals of truth and utility (usefulness) should be reflected in design. In other words a building should be "truthful" and express its purpose and function, and should be devoid of any pretence or false facade, being true to both form and function. Scott in his book The Architecture of Humanism states that good architecture should satisfy three requirements, namely, "firmitas, utilitas and veritas", meaning it must be firm and strong, useful and truthful. By truthful, Scott suggests something that meets the criteria of aesthetic judgement - essentially that it is beautiful. The proper relationship between form and function is according to Scott what in the final analysis determines beauty.[37]

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rather than the maximum environmental conditions. In other words the animals that survive best are those that can cope with the minimum requirements or conditions imposed by nature.

[37] See G. Scott. The Architecture of Humanism. New York: Doubleday Anchor Books, 1956.

Le Corbusier (Charles Edouardo Jeanneret-Gris) (1887-1965), one of the most influential of the more contemporary urbanists, perceived the City in geometric forms. Order was his prime concern. Free man he contended can create cities in pure geometry. In Urbanisme (1924) he states "A town is a - city. It is a grip of man upon nature - Geometry is the means".[38] He maintained that engineering aesthetic was superior to the eclectic approach to architecture and that the house was in fact a machine for living, "machine a habiter", and the city was the extension of the house. Landscape paintings by artists such as John Constable and many of the French Impressionist painters endeavoured to likewise portray scientific truth on their canvasses and drawings of nature. They saw order inherent in the natural systems and they attempted to discover and imitate this inherent geometric order in nature on their canvasses.

Aesthetics in the form of order and regularity seems to have been a common thread linking all the urban utopian designs whether fused by belief, or need, or for protection and fortification, or to redress social injustice or even to seek an escape in a utopian dream. The late Renaissance period (1500- 1600) particularly saw a profusion of urban design ideals centered mainly in Italy. The added criterion of fortification to the geometric idiom, further enhanced

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[38] Le Corbusier, Urbanisme. Trans.,as The City of Tomorrow and Its Planning. by F. Etchells. London: Architectural Press, 1929. p. 1.

design possibilities. Vitruvius (100 B.C.) De Architectura Libri Decem (c.26.B.C.), wrote that the fundamental principles of architecture were order, arrangement, eurythmy (beauty), harmony in proper propotions, symmetry, propriety (perfection of style) and economy,[39] and all related to human proportion. He saw radical concentric form, as an ideal city plan, and advocated the use of rectangles in designing rooms in which one side is square times the other side. It is interesting to note that all the utopias, beginnings from Plato's Republic were defined in rigid geometric form. "A kind of mechanical rigidity afflicts all utopias", says Mumford. This is partly because of a belief among the Utopians that there is only one method to achieving utopia.

In Eastern thought likewise geometric forms constituted sacred idiom. Square represented the basic form - the "Vastu-Purusa-Mandala" ; Vastu representing the site, the bodily existence, Purusa, the essence, the principle where all things begin, and Mandala, the form of Purusa, the plan. The principal form is always square and the knowledge of its correct development constituted the ancient science and art of architecture and town planning. Square as the fundamental form in Hinduism could be converted into triangles, hexagons or circles, but had to be of equal area to retain its Vedic metaphysical symbolism. Square as the perfect form presupposes the circle and results from it. It represents static

[39] See Marcus Vitruvius Pollio, The Ten Books on Architecture. Trans., M.H.Morgan. New York: Dover Book, 1960.

order, the permanent, the eternal. The shape of the Vastu the abode of the Gods, and its size is always determined by Vedic rituals and religious codes.[40]

Alberti (1404-1472), in his book De Re Aedificatoria (1452) sets out theoretical urban design concepts notably the centralized square and radiating streets.[41] Da Vinci the giant of the Renaissance included among his works, ideas on town design and ideal cities, including proposal for new towns, not too dissimilar to the form later postulated by Ebenezer Howard,for his famous Garden Cities. Palladio (1570) resorted to the Golden Ratio as the "Divina Proportiones". Scamozzi,(1615) perhaps the only Renaissance urbanist to have his ideas of utopian design in fact implemented, designed the fortified town of Palma Nova (1593) a polygon with a gridiron pattern imposed on a radial street layout. These were some of the more notable earlier attempts at designing ideal cities in geometric idiom.[42] In fact both the Greek word for city 'polis' which means 'ring wall', and the Roman word 'urbs' which means 'circle' derived from 'or-

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[40] For an excellent treatise on the subject see Stella Kramrisch, The Hindu Temple, 2 Vols. Delhi: Motilal Banarsidas, 1976. See also B.B.Dutt, Town Planning in Ancient India. Delhi: New Asia Publishers, 1977, and also P.K.Acharya, An Encyclopaedia of Hindu Architecture. Bhopal: J.K.Publishers, 1978.

[41] See Leone Battista Alberti, De Re Aedificatoria. London: Tiranti Press, 1955.

[42] A.J.Morris, History of Urban Form. London: George Goodwin Ltd., 1972.pp.121-154; and Dan Pedoe, Geometry of the Liberal Arts. Harmondsworth: Penguin Books, 1976. p. 108.

bis', in essence indicate the geometric perception of the city even in the ancient times. In Hinduism, likewise the word 'mandala' the basic form of the city, literally means 'circle'.

Similar activity was also evident in the period following the Industrial Revolution. Ideal Towns were designed to seek social redress or justice, to house the working class people and generally to create better and healthier living environments. Social Reformers, as they came to be known, sought to create ideal communities through ideal city forms, and to escape from the existing problems facing the Industrial cities. Always geometric in design, the plans reflected discipline, order and a hierarchial structure. It was communal living framed in common good and common goals, and couched in political and philosophical ideology. Claude Ledoux (1736-1806), designed "Salines at Chaux"(1776), in strict geometric form for salt workers in France. Necessity was the criterion in his design for self-sufficient communities. Robert Owen's (1771-1858), industrial village of "New Lenark" (1797), was also self-sufficient with facilities for educational and recreational pursuits, in an agricultural village conceived as a large rectangular place surrounded by housing. Charles Fourier (1772-1837), proposed "Phalanstery" (1829), to house industrial workers in a palacelike complex. J. Buckingham (1786-1855), designed the city of "Victoria" (1849), to seek as he put it greatest degree of order, symmetry,space and healthfulness.

Titus Salt (1803-1876), built the city of "Saltaire" (1851), inspired by the writings of Disraeli, particularly the book Sybil (1845), and many others followed with proposal for Ideal Communities to be achieved by means of Ideal Forms sanctioned by "Design Determinism". Dr. Benjamin W. Richardson's (1828-1896) "Hygeia" (1881), a spacious city for fresh air and health, and Tony Garnier's (1869-1948), "Une Cite Industrielle" (1904) where some of the earliest attempts at zoning land uses, appear to have been proposed, were all based on rigid geometric form. Others in the group included Arturo Soria Y Mata's (1844-1920), "La Ciudad Lineal" (1894), octagonal in form, and Ebenezer Howard (1850-1928) outlined his design for "Garden Cities" in his book Tomorrow, A Peaceful Path to Real Reform (1898), as a result of which two garden cities were built: Letchworth (1902) and Welwyn (1920). These two towns later became the percursors of new towns movement in U.K., and in U.S.A.[43]

Of the more contemporary giants of new cities in ideal design were Le Corbusier's La Ville Radieuse (1935) and the capital city of Chandigarh (1953); Frank Lloyd Wright's "Broadacre City" which he elaborated in The Living City (1958), and Niemeyer's "Brasilia" (1956) perhaps best represent fusion of ideology and rigid geometric design as metaphors for ideal cities, strewn with some a posteriori philosophical and political idealism for credence.

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[43] Leonardo Benevolo, The Origins of Modern Town Planning. Cambridge, Mass.: M.I.T. Press, 1967.

The post World War II years however, challenged this faith in City Beautiful theory. It was felt this faith was too inclined towards elitist interests and too simplistic in dealing with real urban problems and moreover that it was ineffective in alleviating any of the ills that the city was increasingly experiencing.

The City Beautiful Theory no doubt created grand designs but failed to make them function. It was an attempt to fit society to the mould of the planner, to the dictates of his own aesthetic and moral principles. It catered well to the tastes and needs of the bourgeois, to the automobile of the industrial mandarin, to the parks and gardens of the leisure class and to the boulevards and avenues for military exigencies. It created a mechanical city beating to the same tempo, to the same pattern, that the urban fabric reflected. It was a city _of_ a few elite people, a testament to their power, but hardly a city _for_ the people.

3.4 URBAN EMPIRICISM AND ECOLOGICAL TRADITION

As early as 1908, The Chicago School of "Civis and Philantropy" was engaged in empirical studies and this tradition was carried further by the Department of Sociology at the University of Chicago (1920-1932), on a more critical basis, with emphasis on empirical methods in the study of urban phenomenon.[44] The Chicago School that was also known

[44] E.W.Burgess and D.J.Bogue, ed., Urban Sociology. Chica-

as The Chicago Human Ecology School, was influenced by the German school. One of the founders of the Chicago School of Sociology, Robert Ezra Park (1864-1944), was greatly influenced by Simmel and Tonnies as well as by the works of Oswald Spengler. The School was also associated, with such names as E. Burgess, R.D. McKenzie, and a number of other empirical researchers.

An article by Robert E. Park The City "Suggestions for the Investigations of Human Behaviour in the City Environment" published in 1915 in American Journal of Sociology, set the stage for social analysis of the city and the ecological study of human community. Many contemporary urban theories evolved from this school of thought and were best enunciated by Louis Wirth in his essay "Urbanism as a Way of Life", published in 1938. Wirth argued the city represents a particular form of human organization characterized by size, density and heterogeneity. Further he maintained that the city could be analyzed from three interrelated perspectives: as an ecological system; as an organizational system; and as a way of life.

Park, in a later article "Human Ecology" (1936), maintained that human society was organized at two levels: the biotic and the cultural. The biotic followed evolutionary theory, applicable to man as a species in his struggle for survival through competition, and the cultural was

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go: University of Chicago Press, 1967. p. 4.

superimposed on the biotic in seeking common understanding in the process of organizing the natural social order.

The study of the urban millieu followed two interrelated paths:

1. the study of impersonal materialistic elements of the city as determinants of its density and the competitive elements of the community.
2. the study of social and cultural forces that shape the spatial organization and thus the future of the city, and the communicative elements of the society.

The first group drew its inspiration from Social Darwinism and the concept of the "struggle for existence". They saw the city as a social living organism and as a system functioning on the basis of the competitive market structure, "survival of the fittest" to use Herbert Spencer's phrase.[45] Human societies, they argued, could similarly be studied using the evolutionary approach and the biological concepts particularly in terms of the methods and procedures.

So strong was the influence of Urban Ecology or Human Ecology as it eventually came to be known, that many theories were expounded on urban structure, processes and psychology. Studies that followed attempted to study the

[45] See Herbert Spencer, Social Statics or The Conditions Essential to Human Happiness. New York: A.M.Kelley, 1969 (1851).

land uses of the city, the morphology and the demographic characteristics, differentiating between aspects related to the community and those related to society. In the study of social pathology, one of the classic examples of application of human ecological theories, was Burgess's The Growth of the City (1925), in which using the classical economic theories, he showed that the city developed in concentric zones from the center to the periphery. The central area is the business district surrounded by a belt of slum area called the transition zone and the working-class homes located in the periphery. That is, the pattern of land uses and socio-demographic characteristics are functions of the distance from the city center.

Another theory, following Park's and Wirth's work, saw the cultural, moral and political order as determining the spatial organization of the city. Such a process, they argued, attempts to control and provide a kind of equilibrium in the struggle for existence with the human ecological system. The residential land use pattern thus becomes a manifestation of biotic forces.

The Human Ecology School concerned itself not only in quantifying and studying the nature of urbanism, but, as well, in trying to find solutions to the problems it uncovered.[46] They believed that the ecological approach not only

[46] A.W. Small (1854-1926) the founder of the Dept. of Sociology at the University of Chicago was one of the foremost exponents of this idea that sociology should concern

provided for a more objective information base, but also a better understanding of the physical factors of the urban system.

The core distinction that the Chicago School made between the biotic (the Community) as they called it and the cultural levels (the Society) of social organization remained the principal underlying idea.

Firey in his definitive study Land Use in Central Boston, published in 1946,[47] however presented a different argument from the competition and conflict assumption of the Chicago Human Ecology School. Competition is the process in which "Community" is based, and conflict or accomodation and assimilation is what "Society" is based on.[48] He argued that values played a very important role in determining the pattern of land uses.

There were a number of empirical theories that emerged following the classical theories in urban ecology: the Concentric-Zone Theory by Burgess (1925); and the Sector Theory by Hoyt (1939), the Multiple-Nuclei Theory by Harris

itself not only with problems of society but also in seeking means to solve them. See J.H.Abraham, Origins and Growth of Sociology. Harmondsworth: Penguin Books, 1973, p. 326, see also John C. McKinney, Constructive Typology and Social Theory. New York: Appleton-Century @ Crofts, 1966, p. 71.

[47] See W. Firey, Land Use in Central Boston. Cambridge, Mass.: Harvard University Press, 1946.

[48] Milla A. Alihan, Social Ecology: A Critical Analysis. New York: Columbia University Press, 1938, p. 71.

and Ullman (1945), the Rank Size Rule by Zipf (1949), Central Place Theory by Christaller (1933), The Law of Retail Gravitation by Reilly (1931), the Location Theory by von Thunen (1826), and later by Webber (1900) and Losch (1929), Social Area Analysis by Bell (1959), Shevky and Williams (1949), Land Rent Theory by Alonso (1964), and the more integrative models of urban systems by Lowry (1964) and Forrester (1969). They were all attempts at explaining the spatial organization of the urban phenomenon, urban hierarchies, locational patterns, factorial ecology and the systems-based urban dynamic models.

These were, however, all classical equilibrium theories and were based on restrictive and often unrealistic assumptions. They were attempts at identifying regularities in spatial patterns as determined by socio- economic-demographic characteristics.

Following these various directions, there emerged a whole range of new theories and urban models grounded in the social and economic sciences. They were mostly methodological, technique-oriented and eclectic in nature. They emerged partly as a result of the emerging computer technology in the 60s that facilitated analysis and manipulation of large amounts of data, partly as a result of growing pressures to deal with the problems of urban growth, housing, transportation etc., and partly as a matter of urgency and efficiency. The models also provided needed predictive tools and the empirical basis for policy and planning decisions.

On the whole, Empiricism provided a powerful tool for planning because of its method of working with factual data derived purely from observations. It represented a strong belief in the power of observation and faith in its explanatory and predictive capabilities.[49] It legitimized planner's activities, absolved them of any human errors and reinforced the myth that these theories and models could in fact provide solutions to the planning problems.

The shift from theory to more methodological orientation was partly as a result of the work of the Human Ecology School and partly due to new myth created by technological sophistication and new techniques such as social area analysis, factorial ecology, systems analysis, linear programming, et cetera. Most importantly, it was the availability and the possibility of acquiring and analyzing large amounts of data that fired the quest for more and more data, on the fallacious belief that more data meant better solutions.

The problem however was not so much of collecting and interpreting the data but in understanding and drawing inferences that challenged the planners. In essence, most of the theories in planning amounted to "post factum" interpretations of some observed phenomenon translated into some generalized empirical statement. Although such empirical

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[49] John C.McKinney, Constructive Typology and Social Theory. New York: Appleton-Century Crofts, 1966, pp. 68-77.

generalizations are necessary they are not sufficient for proper forumulation of a theory, nor are they a prime component of effective solutions.

In practice, however the methodological approach became more tenable. Practice simply became application of data analysis and synthesis with little semblance to its theoretical formulations. Solutions were determined by the techniques and methodologies used and sometimes resulted in the application of intuitive knowledge which was later justified a posteriori through empirical analysis. As a result, normative and functional theories tended to be interspersed and the difference became more and more tenuous.

Social scientists maintain that empirical theories are directed towards the description and explanation of what 'is'; whereas normative theories are directed at clarification and justification of what 'ought to be'.[50] However planning has neither successfully resolved the 'is" aspect nor the 'ought' aspect. In other words, planning has neither adequately determined the causal relationships to adequately explain urban problems nor has it adequately provided the solutions that could bring about desired changes.

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[50] Richard J.Bernstein, The Restructuring of Social and Political Theory. London: Methuen and Co. Ltd. 1979, p. 173.

3.4.1 BEHAVIOURAL DESIGN

The shift from strict design determinism to behavioral design determinism represented a rather minor influence and perhaps a hesitant recognition that beautiful designs do not necessarily produce liveable cities. Cities are not simply extensions of geometry but manifestations of human behaviour.

Such a school of thought could be traced back to Darwin's evolutionary theories (1869), from which human ecology and concern for design in city planning emerged, the concerns now having shifted to studying the influences of human behaviour on the physical and environmental setting. This movement was called ecological psychology, behavioural design, or environmental psychology enunciated by Craik (1920), Barker (1968), Sommer (1969), Michelson (1970), and Proshansky (1971). Collectively, this thrust came to be known as Human Ecology. The "Human Ecology" school per se had its roots in the theories of the Chicago School of Sociology (1920s to '30s) primarily through the works of Robert E. Park, The City (1915).[51]

This School viewed the city as an ecological system made up of physical environment and the social phenomenon. It attempted to analyse human interaction with the environments. Human ecology was defined as the "study of relations

[51] Robert E. Park. "The City". The American Journal of Sociology, Vol. XX, No. 1, 1915.

between men and the environment", and was concerned with growth of cities, distribution of population, utilities and services, land use patterns, and transportation networks - in other words, with the life and morphology of the city. The fervour of this school of thought led to intensive studies directed mainly at surveying and analysing varied community structures, conducting social area analysis and neighbourhood studies, as well as studying other social phenomenon in the urban milieu. It represented an anti-materialistic view point inasmuch as it was an ecological approach to the sociology of the cities.

Central to the Chicago School of Sociology and the Human Ecology School was the belief that environmental resources were distributed on a competetive basis. This belief was based on two principles: the "community" and "society" as two fundamental aspects of human organization. The former representing a "symbiotic relationship" or the relationship that determine social behaviour the natural order and the latter, the "society" as the cultural and moral order determined by the physical and economic aspects of life. This process, they argued, was grounded in the competetive mechanism following the natural tendencies of living organisms - the spirit of competition and struggle for existence.[52] This philosophy however was rejected by J.A. Quinn (1939) and others who favoured the study of the rela-

[52] Milla A. Alihan, Social Ecology: A Critical Analysis. New York: Columbia University Press, 1938. pp. 11-49.

tionship of 'man to man' as of greater significance than the direct relationship of 'man' to his 'environment'.

In the late 60's social and behaviour based design came to be recognized by planners. The pattern of human behaviour, they argued, should determine the urban form. C. Alexander, in his book Notes on the Synthesis of Form (1964), and in a later article "A City is not a Tree" (1965), argued for the philosophy of "goodness of fit". "The ultimate object of design is form" according to Alexander, and the form is determined by the context. In other words, the form is the end product, or the solution, while the context is the problem - and it is the fit between the two that matters.[53] It is analogous to saying that human behaviour patterns are the context that should in the end determine the form. The City, he argued in another article, is a fabric designed to sustain human life, a "Mechanism for sustaining deeper social contacts" and should be designed as such. Kevin Lynch in his book The Image of The City (1960) and W. Michelson in Man and His Urban Environment (1970), postulated theories relating man's behaviour to his immediate environment. Lynch argued for "imageability", of city form and city image, while Michelson was concerned with the interrelationships of social activities and the physical environments.

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[53] C. Alexander, Notes on the Synthesis of Form. Cambridge, Mass.: Harvard University Press, 1964. p. 15.

Behaviour-contingent planning, or the study of how people adjust to the various urban spatial variations is receiving increasing attention. For example studies in "proxemics", the anthropology of the social and personal perception of space, is now being intensively pursued. Research in Proxemics, a term coined by E. Hall and defined as "the interrelated observations and theories of man's use of space as a specialized elaboration of culture",[54] points to a number of areas that need to be examined. The study of proxemics suggests that experience as it is perceived by individuals differs from culture to culture or even within the same culture. In other words, human behaviour, particularly social behaviour should be understood in terms of the needs and drives of the human organism, evolved through biological evolution.[55] Patrick Geddes, as early as 1915 in his book Cities in Evolution had also emphasized the living environments, that need, he said, to be learned by living in them and understanding their social and spatial dimensions.[56]

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[54] E. Hall, The Hidden Dimension. New York: Doubleday @ Co.,Inc., 1966. p. 1.

[55] Raymond Studers article "The Dynamics of Behaviour-Contingent Physical System" published in Design Methods in Architecture (p. 55-70), ed., G. Broadbent & A. Ward. Architectural Association Papers No. 4, London: Lund Humphries, 1969. The paper was originally presented in 1967 to the Design Methods in Architecture Symposium in Portsworth discusses the aspects behaviour studies in design.

[56] See Patrick Geddes, Cities in Evolution. New York: Howard Fertig, 1968.

Thus, spatial separations become meaningful factors in the design of cities. This is not to suggest that spatial determinism is the only criteria but that it constitutes an important new perspective.

3.4.2 ENVIRONMENTALISM

Although of more recent vintage, the roots of environmentalism go back to biblical times. In its current form it is a reflection of scientific determinism that is based on the belief that science through its rationality and knowledge of cause and effect can improve human conditions. By understanding the environment in its causal relationship to man, it is assumed that a more effective relationship could be established.

Two theories have emerged: one maintains that human behaviour is determined by the biological nature of man; the other holds that the environment moulds human behaviour. Although both schools of thought have attempted to justify their theories through scientific paradigms, both have been influenced by religious, ethical, and political convictions. The first position is more strongly advocated, by more conservative and authoritarian-minded people while the latter has been associated with more liberal thinking.[57]

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[57] Anatol Rapoport, Conflict in Man-Made Environment. Harmondsworth: Penguin Books Ltd., 1964. pp. 123-126.

There are scores of examples in the literature expounding one theory or the other, but the central factor, however, is that of man and the conflict he continuously faces - whether it is biologically determined or environmentally moulded. The conflict, however, fails to recognize that postulating a theory in an either/or construct only complicates the matter. Many behaviouralists are now departing from the classical behaviouralism, postulated by John Watson (1924) and B.F.Skinner (1948), and argue that one needs to go deeper into human understanding to assess the behaviour, the inner processes, such as attitudes , feelings and beliefs which are important in determining behaviour. Such an approach, of course attempts to bridge the gap between pure behaviouralists and the environmentalists. Called "Cognitive Behaviour Theory", it emphasises "learning" to respond to the environment and "cognitions" such as attitudes, values and feelings. The Social Learning Theories discussed in a later section had their origins in this school of thought. Sociobiologists, although not denying that learning and socialization do affect human behaviour have nonetheless argued that human behaviour to a great extent is a result of genetically determined traits.

Robert Owen, the social reformer mentioned earlier, rejected the self-made man theory generally postulated by economists. Instead he argued that the environment determines his destiny. In order to alter this condition, one

alters the environment. His 'Institution for the Formation of Character'(1916), was an attempt at recreating the environment to make it more conducive to cooperative human living, and therefore to mould the human character.[58]

3.5 THE CHOICE THEORY AND ADVOCACY PLANNING

Historically the planning process attempted to reflect the 'public good', - the unitary public interest concept of 1950s often called the Elitist Model. It dominated North American social thinking in the 50s and 60s, and was directed at studying the preferences and the value systems of the governing elite. Originally postulated by V.Pareto in The Mind of Society (1935), G. Mosca in The Ruling Class (1939), J. Schumpeter in Capitalism Socialism and Democracy (1943) and C.Wright Mill, in The Power Elite (1956), the model assumes that the real power in a community is highly centralized and highly dominated by the elite of the society.

It is the elites that make or influence decisions, and the authors argue that by studying the preferences and values of governing elites, it is possible to understand the nature of the decisions. Essentially, they attempt to analyze decisions from the point of view of who governs and who makes decisions - as opposed to what makes decision. The

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[58] Leonardo Benevolo, The Origins of Modern Town Planning. Cambridge, Mass.: The MIT Press, 1971, pp. 39-54.

difference is important, the former reflects a unitary interest and is easily discernable while the latter, is an analysis at determining the nature of decision-making in a pluralistic society reflecting the so-called public interest. Planning presumably advocates a consensus and seeks to achieve the illusive public interest; in reality, it simply reflects the elite's interest or the interest of the planner. A single comprehensive plan is usually the outcome and following the tenets of the rational comprehensive model, the plan appears to be both neutral and objective, and in the interest of the public good.

Davidoff and Reiner in their article "A Choice Theory of Planning" published in 1962, and in a later article by Davidoff, "Advocacy and Pluralism in Planning" (1965), they argued against this unitary model. Following Dahl, Banfield and Polsley (1960) who introduced the 'pluralist theory', Davidoff and Reiner argued that given the pluralistic nature of contemporary society - the diversity of interest groups variously endowed, and competing for the limited resources available - it stands to reason that no common or public interest is possible. "Choice" they felt was central to planning and saw the planning process as consisting of a) value formation, b) means identification and c) implementation. The important aspect they argued was 'ends' and their implementation; the means was of secondary importance.

What is needed, they contended, was a plurality of plans and resolutions of conflicts through debate, bargaining and influence. The idea is based on the argument that prevailing pluralistic social and economic conditions require a pluralistic planning structure to articulate the variety of interests and values. The right policy they argued is always a matter of choice and not of fact. The planner should be involved in the political process as advocates of the various interest groups other than the authority producing the official city plan.[59]

Meaningful public participation, no doubt, constitutes an important element in planning. Many planning issues can only be dealt with adequately in a public arena, in a political milieu, because they are not susceptible to technical solutions, nor any objective answers. An advocate planner assumes under this model a much broader role, moving from the traditional role of technician to a proponent or advocate of specific courses of action or plans. Such a process according to the authors would produce superior plans as a result of the competition and would offer a better chance of being implemented. Their arguments are based on two beliefs:

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[59] P. Davidoff and T. Reyner, "A Choice Theory of Planning". JAIP VOL. 28, MAY 62. PP. 103-115, and P. Davidoff "Advocacy and Pluralism in Planning", JAIP. Vol. 31, Nov. 1965. pp. 331-228.

1. Only the public have the right to make the decisions that affect their lives, and
2. The role of the planner is mainly advisory, and should be to represent interest groups or a community in advocating their plans.

The opponents of advocacy planning, however, have argued that it is basically impossible to prevent personal values from intervening in plan making process. Also they state that the planner has powers to manipulate and control to seek his own ends, because of his special role as an advisor and an exponent of the interests of the community he represents, and because of the technical sophistication he possesses. His powers to activate and mobilize the resources of the community or interest group he represents, could easily end up being powers to manipulate and control to seek his own ends. Such a possibility cannot easily be discounted given that knowledge can indeed mean power.

It is also interesting to note that advocacy tends to mobilize resources more for negative issues, preventing something undesirable from happening, rather than for pursuing a purposeful objective or good. It responds better in a reactive role - rather than in any innovative forward looking capacity. It requires that planning become value-laden, but the planner be value-free - a construct that is difficult to reconcile. It attempts to seek consensus through debate and compromise, and provides alternatives by widening

the range of choices and goals, and by opting for a multiplicity of plans rather than a single end-product from the city hall planners.

J. S. Mill (1806-1873), observed that whatever the predisposition and benevolence of the representative towards the interest group he represents, he is rarely capable of an accurate representation because each man only knows his own interest best.[60] If this be true then the whole concept of advocacy planning becomes questionable by the mere fact that its basic tenet is accurate representation of the community interest clearly distinguished from his own interests or biases. The planner it is believed in such circumstances would express or make known before hand his biases and proceed to identify and articulate the interests of the community he represents through consensus and debate. The question that arises however is whether it is in fact possible to be neutral particularly in the advocacy position that the theory posits. City planning in an advocacy role becomes simply a means for determining policy, - the goal identification becomes an activity central to planning and more important than the means, or choices of instruments. Besides an advocates avowed interest is simply to advocate and argue his point of view, even at the cost of negating the opposing position whether right or wrong. Such an approach would at best constrict full discourse in the planning process, that

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[60] See J.S.Mill, Considerations on Representative Government. London: G. Routledge, 1861.

attempts to seek a synthesis or a consensus for the plan of action.

3.6 ORGANIZATIONAL THEORIES IN PLANNING

The role of organizations in planning is becoming increasingly important. The works of March and Simon, (1958), Bennis (1959), Bennis and Chin (1961) and Cyert & March (1963), were to an extent responsible for this new direction in planning. Their basic premise states that since human behaviour is affected by organizations, it stands to reason that organizations in turn can be adapted to produce desirable behaviour. The main purpose of an organization it is argued is to advance the common interests of the organization, through collective rationality, and consensus building within the membership.

Talcott Parsons (1960), defines organizations as a social unit, "deliberately constructed and reconstructed to seek specific goals".[61] It suggests deliberate planning of organizations as instruments to seek common goals or to further the common interests of their members. Organizations, therefore, can perform functions most effectively where there are common purposes and interests to be pursued. In planning, such a model offers very good possibilities. But there are a number of conditions that need to be satisfied.

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[61] See Talcott Parsons, Structure and Process in Modern Societies. Illinois: Glencoe Publishers, 1960.

An organizational theory will have to be able to define the most appropriate structure of the organization necessary to achieve a desired end. As well it will have to determine the necessary ingredients in the organization "under which behaviour inside organizations becomes standardized and predictable".[62]

The decision-making process in organizations however differs markedly from individual decision-making. This is so because in an organizational structure there are diverse view points and plural interests - requiring therefore, an apparatus for consensus building and internal communication networks. The process is based on understanding collective behaviour and in the abdication of individual welfare to organizational goals. The individual interests in organizations are simply subsumed in the common goals of the organization and the individual thus concentrates on the process involved in reaching consensus based on organizational goals. The process of decision-making in an organization, seeks internal integration between the membership as a strategy to avoid conflicts and schisms, or to avoid working at cross purposes. The formal structure of the organization legitimizes function and gives a mandate to define goals and the means for achieving them - it provides a logic for collective action.

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[62] Joan Woodward, Industrial Organization: Theory and Practice. New York: Oxford University Press, 1966, p. 248.

One of the important characteristics of an organization, is that it is there for a definite purpose. The organization always assumes an interventionist role in instituting any change and it does so in a rigid and mechanistic way. It is ideological inasmuch as its beliefs are shared by its membership as a criterion for membership. It also self destructs if it does nothing to further the interests of its membership or if its objectives have been achieved.

Although Plato noted that by changing human institutions, human nature could also be changed, Rousseau argued the contrary: that only by abolishing human institutions, could human nature resort to its natural instincts following natural laws, and free itself from the bondage of institutional structures. These two views do not, however, detract from the validity of oganizational theories particularly as they apply to planning. Given the fact that Institutions in contemporary society are almost a way of life, and that planning calls for collective action in seeking collective goals, such a model has potential applicability to planning.

3.7 THEORIES OF SOCIAL PRACTICE

Attempts at reconstructing society and theories in this direction have made their mark on planning thought more in explaining society than in postulating any set solutions. Karl Mannheim (1893-1947) was one of the earliest to expound the theory of social reconstruction in which he sought to

reconstruct society through the process of re-education.This represents a strong and very relevant dictum for planning. Although education as a pursuit of human happiness dates back to the Platonic era, its reformulation according to Mannheim in the early 1900s saw the planner as a social scientist, and an active participant in social change. He felt that, 'to work in the social sciences one must participate in the social process'.

Social theorists link knowledge to action. In essence they develop a symbiotic relationship between thinking and doing, between knowledge development and knowledge use, between knowledge and society, and between ideas and social action. Thinking always takes place, according to Mannheim, within societal context; it is not a free activity. These linkages are not only relevant to our ideas but they determine the nature and content of our experiences and observations. Such a thesis presents many implications for planning, particularly regarding the way in which problems are formulated and defined, and in the way in which they are solved.

In his sociology of planned reconstruction Mannheim argued about the crisis in society caused by "fundamental democratization". In this process the elite have lost control, and power now rests in the hands of the masses, most of whom, either by design or otherwise are kept at low intellectual level. As such, their decisions tend to be guid-

ed by non-rational or emotional urges, and thus present a threat to civilization. Hence, he believes there is a need to reconstruct society to provide more intellectual insights by what he calls "substantive rationality". This would occur through conscious rational planning for a new planned order through "planned thinking". Thus planning would be a means of working towards social reconstruction.[63]

Karl Marx (1818-1883) likewise saw social change as an inevitable phenomenon directed towards human liberation, and towards a classless society. For Marx, society was always in a state of tension and it is this tension that generates change. Struggle is, therefore, a necessary condition for change and social conflict the essence of historical evolution. All social relations are rooted in historical fact, including ideas, values and material conditions. Like Mannheim, Marx saw thinking as a social activity, necessary to bring about social change. The classless society, he argued, was inevitable and would come as a consequence of the struggle. In the end, he maintained, it is the unity of theory and practice, (the praxis, the philosophy of action), and the re-establishment of the social order and social relations between the masses and the ruling elite that matters. The masses, he said, need to gain knowledge and the eventual dictatorship of the proletariat.

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[63] See Karl Mannheim, Man and Society in an Age of Reconstruction. New York: Harcourt, Brace & World, Inc., 1940.

Rousseau (1712-1778) in Emile (1762), had also argued for the need to re-educate society in the pursuit of individual natural rights, and to free man from the restraints of society. By re-educating, however, he meant a return to the stage of naturalness, to the basic nature of man not as an instrument of change but as an instrument of freedom.

These theories have their roots in psychology, biology, education, and cybernetics, at least in the way in which the social learning theories are interpreted in planning discourse. These disciplines generally suggest that morality has a culturally defined meaning and that it is from parents and other socializing agents that children begin to learn rules and codes of behaviour in society.

A problem, however, arises with the dilemma of reconciling human "feelings" with human "thinking". The psychoanalyst maintains that people behave in the way they feel, 'people are what they feel', while the cognitive theorists hold that 'people are what they think'. This differentiation is at the crux of social learning theories.

Should social learning be a mutual activity - a process of mediation in re-education or should it be an activity of a deterministic nature directed at changing the feelings and the concomitant thinking process? A number of authors have attempted to explore these ideas - A. Etzioni

(1968); E. Dunn (1971); D. Schon (1971); J. Friedmann (1969 and 1973); C. Hampden-Turner (1971); Dennis Goulet (1971) Ivan Illich (1970), and Paulo Freire (1975).

Etzioni believes that active participation is the key to societal change. To achieve societal goals and preserve societal values, a mobilization of human resources is necessary. The Planner as a consensus/conscience builder should be involved as an active member of the team seeking changes. An active society is one which is master of its own destiny.[64] Dunn maintains that the evolution of society could be achieved through the transformation of the individual inertia or motives. He calls this a "social evolution" by change in social behaviour through organismic adaptability. The planner, a component of this change, is a member of the social milieu seeking social evolution through the process of individual growth. Using the biological metaphor, he subscribes to the competitive system of Social Darwinism, that is the survival of the fittest. He also argues that the biological evolution differentiates from the social evolution because of the inherent nature of human capacity for purposeful behaviour.[65]

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[64] See Amitai Etzioni, The Active Society. New York: The Free Press, 1968.

[65] See Edgar Dunn, Economic and Social Development: A Process of Social Learning. Baltimore: The John Hopkins University Press, 1971.

Schon, (1971) believes that a more effective learning system will create, although gradually, permanent changes. His concept of 'Dynamic Conservatism' of institutions, explains his argument contra small gradual incremental change, which he feels is ineffective and incapable of dealing with changes adequately.[66]

Friedmann sees planning as a form of social learning, which attempts to mediate between knowledge and action in what he calls "Transactive Planning". That is sharing and engaging in mutual growth and development through transaction of knowledge - a kind of "learning society" evolving through dialogue. The role of the planner becomes very significant in directing change. Transactive planning, assumes that the planner acts or will act in the best interest of the community in seeking the desired changes. Friedmann suggests that social practice needs to incorporate social values, that determine the nature of the problem. It also needs to understand a theory of reality that can assist in defining the problem situations, and in developing a detailed plan of action which is politically viable and able to mobilize social action and the necessary resources.[67]

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[66] See Donald Schon, Beyond the Stable State. New York: W.W.Norton and Co. Inc. 1971.

[67] See John Friedmann, Retracking America: A Theory of Transactive Planning. New York: Doubleday Books, 1973.

Hampden-Turner, using a psycho-social model, emphasizes the role of the individual in an existential state as the fulcrum of change: it is at the level of the individual that change should be initiated, he maintains, because man as an existential being is responsible for his own actions and destiny.[68]

Ivan Illich, in Deschooling Society argues that the present educational system is not only inefficient in terms of education it provides, but it is also very divisive. He contends that the need is not only transacting knowledge, but also re-education to promote the ideal of conviviality in ways that they themselves devise, as the key for social change. Not, Illich argues, through planned institutionalized learning systems, but through mobilization of the whole population that, education for all can be realized,- "education for all, means education by all". Contemporary man attempts to modify the world to suit his image, to create a world that is entirely man-made, but at the end discovers that it is himself that has to adapt and readapt to fit in the world that he attempted to create.[69]

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[68] See C. Hampden-Turner, Radical Man: The Process of Psycho-Social Development. Garden City, New York: Anchor Books, 1971. See also Dennis Goulet, The Cruel Choice. New York: Atheneum Books, 1971.

[69] Ivan Illich, Deschooling Society. Harmondsworth: Penguin Books, 1976. p.29 and 108.

Similar arguments are also put forward by many others. There is general agreement on the need for the re-education of man, but great differences in the proposed means of achieving it.

Paulo Freire sees education as an instrument by which man can understand the problems of society and the living environment and thus use it as a tool for social change. Education becomes the means by which the masses can perceive, critically understand, and intervene as desired. This gives man the ability to be creative, to share and to solve problems in his own terms. It makes man more fully human and more responsible for his actions. What is needed, he says, is dialogue and exchange of knowledge for the realization of freedom. Freire states,

> "I repeat: the investigation of thematics involves the investigation of the people's thinking - thinking which occurs only in and among men seeking out reality together. I cannot think 'for others' or 'without others' nor can others think for me. Even if the people's thinking is superstitious or naive, it is only as they rethink their assumptions in action that they can change. Producing and acting upon their own ideas - not absorbing those of others - must constitute that process".[70]

On critical examination one finds that the social learning theories are essentially common-sense concepts, which are in turn based on experience. It derives its raison d'etre from life experiences and calls for dialogue and par-

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[70] Paulo Freire, Pedagogy of the Oppressed. London: Penguin Books, 1975, pp. 80.

ticipation in bringing about desired changes. Given that the pursuit of freedom is almost an impossibility in an disordered society, the need for planning becomes much more crucial in a democratic society. But this can only be achieved according to the proponents of social learning theories, through the development of moral consensus, through re-education of man. Active involvement and transaction of knowledge towards mutual re-education can become the goal and the means at the same time. Planning can thus become a social learning process rather than a deterministic, end-oriented mechanistic activity. Man becomes the focus of the system and it is either through individual or collective change that societal change is achieved.

3.8 CRITICAL THEORIES

The "Critical School" of thought maintains that planning should direct its efforts at critically examining social change with a view to ultimately 'restructuring' it based on the critical findings. It was a point of view that was advocated by the Frankfurt School's "Institute fur Sozialforschung" founded in 1923. It was associated with such names as Max Horkeimer (1895-1973),[71] Theodore Adorno (1903-1969), Herbert Marcuse (1898-1979) Eric Fromm (b. 1900), and later Jurgen Haberman (b. 1929).

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[71] See Max Hokheimer, Critical Theory. Trans.,Mathew J. O'-Connel et al. New York: Herder and Herder, 1972.

Not unlike the Phenomenologist E. Husserl (1859-1938), the Critical Theorists were skeptical of the positivistic tendencies that were increasingly dominating intellectual thought in the early 1900's. The traditional theory, they argued, is unable to make distintion between reality and appearance. It is this particular characteristic, of differentiating between knowledge and beliefs or opinions, that distinguishes critical theory.

In essence their major premises are as follows:

1. That our ideas emanate from the environment in which we live.
2. That the pursuit of knowledge should not be directed at objectively seeking a synthesis between theory and praxis, but towards a critical analysis of society, with a view to achieving desired social changes, through the political practice.

'Reason' they asserted was the 'critical tribunal' and the critical determinant in judging the criteria of freedom and pleasure, would be the workings of existing societies.

They rejected the "technique -dominated" society, claiming that it generated a technocratic society, whose ideology and workings precluded human freedom and pleasure. Technique, they maintained, imposes a rationale of its own on human behaviour; it creates a "false consciousness" as a

mechanism to control society. The whole of scientific and technological rationality needs to be de-mystified and its true purpose understood. Mass culture, thus, becomes a means to free society from the clutches of efficiency and technological rationality resulting in a technocratic consciousness. Critical theory has a fundamental practical bias towards human improvement and in fostering self-consciousness that is reality-based. They argue that it is through a critical approach to society that mankind will be able to design and guide its own future.

A variation on the theme appears in the Hermeneutic school of thought. Hermeneutics is a Greek word meaning to understand. The philosophy of Hermeneutics is not interested in theories or systems per se, but in their role towards understanding the meaning of the nature of the system; that is understanding the language, understanding the environment, understanding the man. By understanding in this particular context is meant to know, the "what" rather than the "how", in the propositional sense of its use or activity, - a kind of practical philosophy that seeks an ethical guide in understanding the meaning achieved through self-reflection. It is a kind of relationship between discourse and action.[72]

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[72] See Richard J. Bernstein, The Restructuring of Social and Political Theory. London: Methuen and Co. Ltd., 1975. pp. 179-225. See also R. Keat and J. Urry, Social Theory as Science. London: Routledge & Kegan Paul, 1975.

3.9 THE SOCIALISTS AND THE EVANGELICALS

While positivism and utilitarianism discussed earlier had very significant influence on planning movement generally, socialists and evangelicals raised some very critical issues in the planning discourse. It shifted the focus from purely scientific endeavours of planning and its emphasis on utility functions as measures of success or failure, to more humanitarian concerns; concerns regarding the nature of social change, class inequalities, deprivation and the living conditions of the urban poor. Socialists were critical of the new forces of urbanism and contended that the urban environment was in fact shaped by political ideology, which in turn gave form to the physical plan of the city.

Socialists thinkers like Henry Lefebvre (1971), David Harvey (1973), and Manuel Castells (1977) argued in their writings that it was important first to understand how the capitalist system operates in terms of social, economic and political process in order to recognize the workings of urbanism. Castells for example in his book The Urban Question (1979)[73] maintains that the urban space is indeed an expression of the social structure generated by the economic, political and ideological forces that manifest themselves in social practices and class conflicts. The city, according to Castells, is a place of consumption more than

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[73] See Manuel Castells, The Urban Question. Trans., Alan Sheridan. Cambridge: The MIT Press. 1979.

of production dominated by the strong political force of the new middle class. Harvey in Social Justice and the City (1976)[74] points out that urban spaces are controlled by the different social classes and by the redistribution of income that such divisions generate as an organizing principle. Evangelicals on the other hand, as David Eversley[75] points out, moved even beyond the need to eliminate social injustices in the city, to pleading for a more selfless living and for human dignity. While such movements influenced thinking of many planners they had very little success in realizing their idealistic objectives.

3.10 ANARCHIST THOUGHTS IN PLANNING

Rather interesting polemic works introduced by D.L.Phillips in Abandoning Method (1973), and more recently by P. Feyerabend in Against Method, (1975), seem to present an alternative to the dilemmas posed by the scientific methodology. These polemics move full circle from the pure objectivity of true knowledge to the complete freedom of "anything goes". They hold that no perfect knowledge of anything is possible or even desirable, and this view is called "epistemological anarchism". [76]

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[74] See David Harvey, Social Justice and the City. London: Edwin Arnold Publishers, Ltd., 1976.

[75] See David Eversley. The Planner in Society. London: Faber and Faber, 1973.

[76] Some of the important men in the anarchist school of thought include Tolstoy, Gandhi, Kroptkin, Schumacher,

D.L.Phillips presents a somewhat different approach to Feyerabend's. Phillips emphasizes play as the principal activity in advancing knowledge and what he calls "playful theorising" as a legitimate and effective activity. Playful activities, according to Phillips, would be activities

> "not guided by formal rule or methods but engaged in for themselves. Play is existence centered in itself. Both play in the usual sense and proliferation as a kind of play - form, help to assure our freedom so that we can decide (if initially only in fantasy) the way we want to live our lives and develop our talents, rather than adopting by habit or following proper methods".[77]

Play, according to Phillips, thus becomes a viable alternative to method, provided of course it is pursued on an individual basis and played for its own sake rather than for the sake of others. In other words, play should have freedom and not be governed by rules and regulations or be methodical.

A playful attitude, says Phillips, "is a necessary precondition for 'experiencing' the world". [78] We should not use method to guide our thought, but create the world or look at the world through our own eyes rather than through the instruments of science or methodologies. In other words, we need to play "the game of the world" in its own terms in an attitude of freedom and open inquiry.

Roszak, Freire and Illich.

[77] D.L.Phillips, Abandoning Method. San Francisco: Jossey-Bass Publishers, 1973. pp. 158-159.

[78] D.L. Phillips, ibid. pp.160-163.

Theorizing, he maintains, is like raising consciousness and is more of a reflexive activity. It is Pre-Socratic in concept, and thus not only restrictive but also often false.

The theory of play comes from Huizinga, who first enunciated it in his critical book Homo Ludens (1938). Huizinga maintained that civilizations cannot exist without the play element, the "play spirit" as he calls it. Play is the force that generates new cultural forms and seeks new synthesis in an evolving pattern accomodating the new as well as the old, but always creating new experiences. Play, he contends, is freedom; it is a free activity pursued for its own sake. It is not real or ordinary life, it is like experiencing another world, a world of pretence lived for a limited time. Being a cultural phenomena rather than a biological phenomena, play reflects society's mores and codes of life. [79] Phillips uses a similar metaphor as his alternative method to traditional science based activity.

Play, these theorists contend, is a goal oriented activity that attempts to achieve an end objective through inefficient means, by often introducing unwarranted obstacles. One of the important characteristic of play is that both the ends and means are interdependent and both are limited and a priori determined. Planning on the other hand

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[79] Johan Huizinga, Homo Ludens. A Study of Play Element in Culture. Boston: Beacon Press, 1955. p. 211.

attempts to achieve the ends through most efficient and rational means. Introduction of obstacles for example in planning would constitute irrational behaviour.

E. Erikson (1950) believes that reeducation of man is essentially a force mobilized through play and playful integration. As Huizinga noted, "Inside playground an absolute order and peculiar order reigns... it creates order, is order. Into an imperfect world and into the confusion of life, it brings a temporary,a limited perfection... play has a tendency to be beautiful." [80] In other words play is an activity that is more natural to human behaviour and more effective in guiding human actions. Its rules are the game itself, and these rules are binding upon the players for the duration of the game only. It recognizes its limitations and seeks to achieve its ends within these set limits. Caillois remarks that play involves the totality of human behaviour and interests, and can provide useful indications as to the societies preferences, weaknesses and strengths at a given stage of its evolution. [81] [82]

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[80] Huizinga, op cit. p.10.

[81] Roger Caillois, Man, Play and Games. Trans., Meyer Barash. New York: The Free Press of Glencoe Inc. 1961. p.175 & 83.

[82] E. Erikson, Childhood and Society. New York: W.W.Norton & Co., 1963, p.240.

Feyerabend suggests that science is essentially an anarchist activity for two reasons:[83]

1. The world we inhabit is relatively an unknown entity;
2. Science cannot reconcile itself with moral issues that guide human behaviour.

Science, he argues, is constantly at conflict with freedom of thought and freedom of critical thinking. Absolute truth, Feyerabend contends, leads to absolute conformism and uniformity; it endangers critical thought processes and individual development.

According to Feyerabend ,theory is not best evaluated by reference to facts or observations as the scientific method ordains, but to other theories, that provide a world view, and that can act as standards of criticism. It is through a comparison of ideas with other ideas that new knowledge develops best. This, of course, implies that the more theories, the better, as there is more challenge for more theories to develop and improve each other. Truth he contends is relative to a model and there is no neutral vantage point from which to adjudicate among the various models of the world.

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[83] P. Feyerabend, Against Method. London: NLB Publishers, 1976, pp.17-22.

The condition of consistency that is inherent in traditional methods which demand new hypotheses be based on accepted theories, is unreasonable because it tends to sanctify and preserve older theories which may not necessarily be good. Simply adding new theories based on equally unsatisfactory kinds of knowledge, does not advance knowledge. Knowledge is best advanced by proceeding counterinductively, because "observational reports experimental results, factual statements either contain theoretical assumptions or assert them in the manner in which they are used".[84]

Feyerabend argues for "Methodological Pluralism": that we must keep our options open and not restrict ourselves to any single methodology or epistemological prescription. His purpose is to understand the natural system and increase human happiness rather than to defend a particular paradigm or a set of procedural rules. The anarchist employs a plurality of methodologies to attain objectives; thus witchcraft, sorcery, secondsight, astrology, can all provide potentially valuable resources or insights for understanding the natural system.[85] A kind of approach used by the Dadaist, whose favourite past time was to confuse the rationalist by simply inventing compelling reasons for unreasonable doctrines in order to emphasize the cognitive domain of human intellect.[86]

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[84] P. Feyerabend, op.cit. p.31.

[85] P. Feyerabend, op. cit. pp.35-53.

Feyerabend's thesis is simply that there are no eternal or universal intellectual standards. If science is to progress it must develop as an anarchist activity - that is "anything goes" including "intellectual dishonesty". The options must, of necessity, be kept open, and not be restricted in advance to some artificial standards that in fact inhibit progress. He suggests the use of persuasion, and rhetoric, rather than purely reason or logic. It is, he concludes, an opportunistic activity. In fact, a strong clash between facts and theories could result in progress.

Feyerabend maintains that "Science is an essentially anarchistic enterprise: theoretical anarchism is more humanitarian and more likely to encourage progress than its law-and-order alternatives".[87] Knowledge development requires some kind of a spark, insight, a flash of genius like Galileo, Newton or Einstein, that cause great leaps in human

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[86] Dadaism was a reactionary movement in art that originated in Zurich (1916). It was a reaction against the senselessness of the War and against the rationalistic materialistic society. Although not too well known, Dadaism rejected the rigid canons of art and pure formality as simply irrelevant and purposeless. It was essentially an anti-art movement and emphasized the irrational aspects, the human consciousness, as being much more relevant and reflective of reality.

[87] P. Feyerabend, Against Method. London: NLB Publications, 1975. p. 17. Much of this material is taken from three good critiques in Philosophy of the Social Sciences. Vol.7,Vol.1,2 & 3, 1977. pp 265-302.,by Paul Tibbetts.'Feyerabend's Against Method: The Case for Methodological Pluralism'; Thomas Kulka. 'How Far Does Anything Go? Comments on Feyerabend's Epistemological Anarchism'; and J.N.Hattiangadi. 'The Crisis in Methodology: Feyerabend'.

knowledge and constitutes what Kuhn calls a new paradigm, a new synthesis that is then accepted as knowledge. That is in essence what Feyerabend is advocating and his "anything goes" theory is perhaps what will create conditions for such giant leaps to happen.

Chapter IV

THE PROCESS AND PRACTICE OF PLANNING

> "Knowledge of everyday life is structured in terms of relevances".
>
> Berger & Luckmann

4.1 THEORY AND PRACTICE

The dichotomy between theory and practice has been at the core of controversy in planning. Planning is believed to be an empirically based discipline, deriving its corpus of knowledge primarily from the faculty of observation and experience, rather than from pure reason alone. It is this characteristic that has led planning to its emphasis on methodology and procedural theories.

Although not the originator of the idea of Empiricism, it was David Hume, the 18th century philosopher who gave the empirical school of thought its more contemporary meaning. According to Hume, the true source of both scientific and non-scientific knowledge lies in the "science of man" based on experience and observation. The science of man is the way in which the human mind processes knowledge and formulates views, impressions and ideas, about things

they believe in. Hume's principle is derived from his concept that every human idea is a representation of previous experiences, observation or impressions. The more complex ideas are derived from the simpler ones which in turn have their roots in past experience.[1]

It is this particular principle of empiricism that becomes the 'sine qua non' in planning and provides the ingredients for man's reasoning processes. Hume does, however, differentiate between knowledge gained through observation and knowledge gained through the use of reason. The former he contends is 'a posteriori' and encompasses all knowledge about the world gained through observation. The later is 'a priori knowledge', a mental logical process (an operation of thought process) internalized to gain knowledge of the ideas emanating from the mind and directed at the pursuit of truth. Hume goes on to differentiate between "analytical knowledge" and "synthetic knowledge". Analytical knowledge, that can claim to be true by definition and is based on the principle that the relations between ideas, cannot be changed without altering the ideas or introducing contradiction. Synthetic knowledge is based on extensive generalizations. It can be derived through intuition, introspection or observation and it is in essence based on the relationship between ideas. Planning knowledge, similar to social science knowledge, falls into the latter category,

[1] See David Hume, An Enquiry Concerning Human Understanding. Oxford: Claredon Press, 1962.

and planning theories are better derived from the powers of intuition and creativity than purely from results of observation alone.

Kuhn argues that what we call 'facts', 'problems', 'solutions', et cetera are a function of our presuppositions and constitute part of the dominant paradigm, a set of assumptions derived from the dominant scientific work or assertions. These presuppositions may be either theoretical or metaphysical, explicit or implicit. Such paradigms, Kuhn argues, attempt to force nature into predetermined conceptual boxes, and thus restrict fuller understanding of the problem in its intrinsic nature. Paradigms, he contends, "insulate the community from those socially important problems that are not reducible to the puzzle form".[2]

Popper maintains that theories must have explanatory power and must seek discourses in practice. That planning theory needs to be informed by practice as much as practice needs to be guided by theory is the argument that is often made. But it is also argued that it must be testable. The reason according to Popper is that when theories are couched in testable form they enable one to speak in a common language and thus avoid arguments that tend to be at cross purposes, but more importantly, testability criterion allow a theory to be falsified.[3]

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[2] See Thomas Kuhn, The Structure of Scientific Revolutions. Chicago: The University of Chicago Press, 1962.

It has also been questioned whether theory represents full truth, whether it represents a convention or an instrument, or simply an operational metaphor. In other words, are theories only tools or are they more than tools or instruments? In this context there are a number of schools of thought, the most important ones are Conventionalism, Instrumentalism and Operationalism. Conventionalism (Poincare) assumes theories to be simply conventions,(that is units in models need not correspond to the elements in the world and the test of the model is pragmatic) formulated for specific purpose and concerned with concepts as they contribute to truth or fallacy. The question of reality in conventionalism remains of secondary consideration, while Instrumentalism (Dewey, Popper) assumes theory as an instrument designed to calculate or predict a phenomenon but says nothing of reality. Its validity is determined by its utility and not by its reflection of reality. Operationalism (Bridgman) assumes that theory has no meaning in itself, but gains meaning only in context of its application. Its main concern is with meaning and reality.[4]

In planning, theories fall in the category of Instrumentalism, that is planning theories become simply instruments or tools for supposedly perceiving and understand-

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[3] See Karl Popper, The Logic of Scientific Discovery. London: Hutchinson Co. Ltd., 1975.

[4] Karl Popper, Conjectures and Refutations: The Growth of Scientific Knowledge. New York: Harper & Row, Publishers, 1963, pp. 59-65.

ing the planning problem in its real nature. But what planning theories in fact do, is distort the real problem to fit the theoretical model. In other words, problems become reflections of the theory through which it is perceived - that is it ignores reality at the cost of an ideal. Instrumentalism is held to reflect reality, but there is no attempt to explain it. John Dewey(1859-1952) used the term "instrumentalism" for his version of pragmatism, as a philosophy of action, education and social reform. Scientific knowledge according to Dewey should be instrumental in problem solving. Popper suggests that data manipulate observations either by means of instrumentation theory or pattern theory. In other words theory is simply an instrument to calculate and predict. Instrumental knowledge assumes that knowledge represents power and truth, and that these are useful concepts, since they provide the necessary powers to control and predict social phenomena. Further more, Popper contends that since all theories are statements describing behaviour, they must all therefore be stated in terms of possible behaviour patterns. These very characteristics, observations and manipulations of data represent the functional approach of science and scientific theories. This is, as can be seen, a direct derivation from 'Quantum Mechanics' theory, where it is believed that theory said nothing about reality, but simply predicted the outcome. As Popper states, "our propensity to look out for regularities, and to impose laws upon nature, leads to psychological phenomena of dogmatic

thinking or, more generally, dogmatic behaviour; we expect regularities everywhere and attempt to find them even where there are none".[5]

Planning theories, however, need to satisfy the following criteria:[6]

1. They must be causally adequate (simple correlations are not adequate enough to explain social facts).
2. They must be useful/workable (generalizations are not adequate to explain human actions).
3. They must be grounded in practical experience (theories that can be collaborated by experience).
4. They should possess explanatory and predictive powers.
5. They should be stated in the context of a clearly identifiable institutional framework, and be descriptive of behaviour.
6. They must be stated in common language understandable to the public (They must be understood by others, even though they need not necessarily be accepted.

It is generally agreed that any research in urban problems must be based on a sound theory to be valid. But city planning theory of necessity has to be interdisciplinary and has to seek its paradigm in interdisciplinary work.

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[5] Karl. Popper, op cit. pp 107-119 and 49-62.

[6] See Karl Popper, op.cit.

During the last two decades or so a lot of interdisciplinary work has taken place in planning, bridging the gap between social sciences and planning, more particularly bridging the gap between theory and method. Interdisciplinary research work and theoretical constructs are put forward, and methods are freely interrelated, and interchanged. The danger in such pursuits is that the distinctiveness of the individual discipline, in this case planning may be lost, and the construct may be reduced to its lowest common denominator and dominated by one discipline. By seeking consensus, there may be losses in the depth of inquiry and understanding, and these constraints must be very carefully assessed prior to integrating disciplines and pursuing interdisciplinary work.

In essence what is required is a theory that can respond to the needs of pluralistic societies with the rigour, coherence and the needed explanatory and predictive power. Most importantly there is a need for theories that are ethic-based, and practice-informed, and conducive to interdisciplinary research, to provide the needed holistic perspective. Planning theories of necessity must reflect social patterns and behaviour. Dewey noted that theories particularly social theories need constantly to be subjected to public scrutiny in order to clarify, refine and justify them.

4.2 PRACTICE OF PLANNING

The state of the art of current planning practice continues to suffer schizophrenic tendencies, caught in what Gregory Bateson calls the "double-bind theory". You advocate a certain direction but through your actions produce quite different results and in the process the subject loses and withdraws from reality. While the practice of planning continued to aspire for grand visions and ideal cities, their actions however, led to different or no results and in the process urban problems proceeded to multiply with no adequate solutions.

If a label can be atached to the philosophy, or principles guiding the current practice of planning, it would unquestionably be the "rational comprehensive" planning model that most distinctly marked planning practice. Rooted in positivisim and doctrine of ultilitarianism, planning continued to produce technical solutions for organizing urban spaces, rearranging land uses and designing systems of transportation networks. The unending quest for efficiency, regularity and aesthetics in a rational comprehensive manner was justified in the name of a unitary public interest. The credo that "more planning is always better than less" planning, generated grandiose plans emulating the Baroque patterns of boulevards, parks and grand vistas. Planners, for all practical purposes, became suppliers of visions and solutions, extrapolating the present to a static future.

In a recent study in Canada[7] the authors found that while the majority of professional planners agreed that a philosophy or theory did guide the plan making process, very few were able to define what specifically were these guiding principles or theories. Likewise an earlier study by Page and Lang[8] found that while most practicing planners stated that the comprehensive planning model was the most commonly used model, there was little agreement defining the nature of this model. A study of American planning practitioners undertaken recently by Baum[9] also found that the majority of the respondents could not specifically identify a theory as underlying their practical work. Neither does any coherent definition of what planning is emerges in the academic or professional planning community. Whether this is a desirable feature or not is of course debatable.

Given such a discord it is difficult to classify plans into any specific categories except to note their underlying principles and examine the resultant product. Until recently and with very few exceptions the same principles of rationality, order efficiency and aesthetics were applied, irrespective of whether the plans were for re-

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[7] See Anne Westhues. "Towards a Positive Theory of Planning" Plan Canada. No. 23:3, Sept. 85. pp. 97-103.

[8] See John Page and Reg Lang. Canadian Planners in Profile. Faculty of Environmental Studies: York University, 1977.

[9] See H.A. Baum, "The uncertain consciousness of planners and the professional enterprise". Plan Canada. No. 20, 1980. pp. 39-53.

building existing cities or building new cities or towns.

While no single school of thought or text on planning dominated planning discourse or practice neither for any sustained period of time, nor with any significant impact on the urban morphology, there were a number of intellectual works that served as guides in the practice of planning. In a way planning practice was an amalgam of ideas that reflected the ideology of the time; the dominant theme be it city beautiful or city functional, or rational; the idiosincracies of the client and of course of the master planner; and the prevailing social economic and physical conditions. Lack of a coherent definition of the nature of planning served to generate a diversity of means and ends as plans for development, with no uniform criteria to compare or evaluate their successes or failures.

Of significance, we have the two texts referred to earlier, namely, City Planning According to Artistic Principles by Camillo Sitte, originally published in German in 1889 and Raymond Unwin's, Town Planning in Practice: subtitled, An Introduction to the Art of Designing Cities, published in 1909 both served as guides in planning practice. Sitte's book advocated systematic analysis based on purely artistic and technical criterias - it was a simplistic approach, for inspite of the added considerations of physical and psychological needs of the people, design principles still dominated. Sitte's model while it served as a guide

for the expansion and planning of Vienna, Dessau and Munich, failed to recognize the complexity that urban living generates in the process of change and growth. At best, the ideas Sitte proposes could help in neighbourhood planning rather than in the planning of large urban centers. Unwin, likewise in the great tradition of architecture, was concerned with the principles of design aesthetics in, as he says "finding a beautiful form of expression for the life of the community", to serve as guiding principles for town planning. This architectural conception of town planning persisted and influenced the planning of new towns, in particular Letchworth (1902) and Welwyn (1919) discussed later, and a number of other new towns in the U.K. and the U.S.A.

Planning thought, theories and ideas, including the utopian visions discussed earlier, also made their imprint in varying degrees on planning practice. Two important contributions in moulding planning though came from social reformer Ebenezer Howard, with his book Garden Cities of Tomorrow (1898) and biologist Patrick Geddes with Cities in Evolution (1915). Howard's ideas were essentially for designing self sufficient communities of fixed size, integrating the best the city and the country had to offer. The dominating criteria were aesthetics, health and efficiency. A number of new towns were built on this conception of design, two of which are discussed later in this Chapter. Geddes' influence was of significance in introducing the no-

tion of the city as a living organism, evolving and growing. He maintained that the proper study of the city should include, a survey of the existing conditions, an analysis and finally the preparation of the plan for development - what he called synoptic planning. This was the beginning of the survey-analysis-plan method that planning practice currently uses. The idea of comprehensive planning had its origins in the works of Patrick Geddes.

The works of Herbert Simon, Braybrooke and Lindbloom on decision theories saw the birth of the "rational planning model", which later incorporated the Geddesian "synoptic plan" to produce the composite "rational comprehensive" planning model, that served and continues to serve as the predominant theory for planning. Variations emerged such as "incrementalism", "middle-range", "mixed-scanning" and even "transactive planning" discussed earlier in Chapter III. These interjections served only to cause a brief respite and some rethinking among planners but had no significant effect in practice. They served to generate dialogue mostly among academics and to further the existing schism between theoreticians and the practitioners who saw no real value in their application to their daily practice nor knew the means to translate these theories into practice.

Perhaps the first radical approach to planning came from Paul Davidoff who in his short paper entitled "Advocacy and Pluralism in Planning" (1965) argued against the "uni-

tary public interest" approach and the idea of a single "master plan". Davidoff advocated the recognition of plural interests of society, the recognition of the various interest groups and their input in plan making. Alternatives and choices, he argued, were critical to effective planning, what he called plural planning. While it generated a lot of academic dialogue and professional interest, it could not be implemented in practice. It lacked institutional structure and any clear direction as to how advocacy planning would generate public dialogue, while serving individual interest groups. The plan for the City of Cleveland (1969) discussed later in this Chapter is perhaps the nearest model, where some of the ideas of advocacy planning emerge.

One of the classic examples of rational comprehensive planning model with aesthetic embodiment, is the plan for the City of Paris (1853-68), created by Georges Eugene Hausmann (1809-91). It was Hausmann's dream to transform Paris into the first great city of the industrial era. The principles guiding his ambitious plan were to reorganise the old City of Paris to new demands of the Second Empire, to meet the needs of accessibility for the great days of celebrations and to be easily controlled in days of violence and riots, both common occurrences of the era; to eliminate infested and unhealthy areas of the city, essentially the poor tenements, and to cause a more efficient system of circulation of air, light and troops. Aesthetics in the grand

ideal of the baroque city were superimposed on the existing medieval core of the city of Paris. The city was seen by Hausmann in purely utilitarian terms, as a technical problem with technical solutions.[10] All decisions were based on analysis of existing situations. The two coordinates or factors used were time and space. These were considered necessary to achieve unity and efficiency. According to Haussmann's own description of the plan, he wanted "to cut a cross, north to south and east to west, through the centre of Paris, bringing the city's cardinal points into direct communication".[11] Rarely was a city plan so comprehensively conceived and so systematically and precisely organized to military exigencies, efficiencies and monumentality. The factories and the working poor were removed from the centre of the city and relegated to lower costs suburban areas, fearing their invasion in large numbers into the core of the city. The radiating network of straight and wide roads were dominant features, and were designed to form a coherent system of communications between the centre and the railway stations as an interrelated system. The plans were carried out to absolute regularity, often with monotonous repetition and symmetry, with uniform frontages in the belief that Paris could be planned once and for all to serve its present and future needs.

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[10] See Sigfried Gideon. Space, Time and Architecture. Cambridge: Harvard University Press, 1959. pp. 641-679.

[11] See Memoires, V Vols., Paris: Harvard, 1890-1893.

Hausmanns' plans worked well for many decades no doubt but eventually proved inadequate to meet the changing neeeds of the growing city. The plan was authoritative, inflexible and static, designed to serve the whims of essentially one man whose vision excluded the interest of the large populace, the poor and the working classes. The plan however, did serve as a model for a number of other cities.

With few exceptions, the creation of new towns and cities faired no better. The same design principles continued to be applied. Howards' "Garden City" ideas, referred to in earlier Chapters, produced the two new towns of Letchworth (1902) and Welwyn (1919). The only variation in the theme was the idea of self sufficiency and the production of a synthesis between town and country, "rus in urbe" - an ideal community that avoids the ills of both the town and the country while enjoying the benefits proferred by both. Letchworth was an experimental town designed by Parker and Unwin following Howards "Garden City" ideal of harmonious balance between industry and agriculture, and separation between living and working environments. Designed to house 35,000 people, the plan was conceived as a complete urban unit to accomodate all forms of human activity within a fixed space and size. It set strict zoning regulations governing the sizes of the houses, their location and gardens and an agricultural belt. Welwyn was likewise designed on the same principles of order, uniformity in layout and elegance of design.

Both the Letchworth and Welwyn development plans were a product of the traditional master plan, rooted in the belief that all human activities could be rigidly delineated and concentrated in a single and fixed space; and that the diverse habits and needs of the community could indeed be caused to operate within a given pattern and structure. While the authoritative tenor of the plan and the paternalistic approach served the formative period of the town development well, it soon proved inadequate to meet the growing and changing needs of the people. The plan did not correspond to social realities, for a living city could not be so rigidly contained in a physical receptacle. Lack of opportunity and choices soon became evident. The physical layout made public transportation impossible. The plans succeeded in some ways not because of deliberate planning action but for lack of it, particularly in areas that planners did not foresee. The "Garden City" idea served as a model for many of the New Towns both in the U.K. and the U.S.A. However, some of the latter new towns like Milton Keynes (1970) in the U.K., were planned to allow for greater public participation, and for more choices and opportunities for its residents.

The Milton Keynes Board together with the consultants and the public input, formulated a set of goals that came close to addressing the real needs of the people. Goals enunciated were:

1. "- opportunity and freedom of choice
2. - easy movement and access, and good communications
3. - balance and variety
4. - an attractive city
5. - public awareness and participation
6. - efficiency and imaginative use of resources"[12]

This represents one of the earliest attempts at planning that while consistent with the rational comprehensive planning theory in terms of formulating goals, analysis and preparation of plans, positively expands its scope to deal with social, institutional, physical and aethetic aspects of the living city. Public participation, growth, change and provision of choices are critical components of the plan.

The new capital City of Chandigargh (1951) in India and the new capital city of Brazilia (1958) in Brazil are the two more contemporary examples of city building from inception, or to use Bacons' term "Painting on a Clean Canvas". Both these plans, no doubt, meet all the tenets of the rational comprehensive planning model, and reflect perhaps, what planning would really like to be if given such a clean slate. It was an ideal opportunity for testing and implementing the best of theories that guide planning practice not only what planning <u>is</u> but much more importantly

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[12] See Milton Keynes Development Corporation "The Natyure of the Plans" in <u>The Future of Cities</u>. ed Andrew Blowers, Chris Hamnett and Philip Sarre. London: Hutchinson Ltd., 1974. pp. 236-244.

what planning ought to be. The latter was no doubt interpreted as an utopia - the ideal city for the people but not by the people.

Both these plans are designs in abstract, conceived in idealism that reflect a quest for monumentality and aesthetic frivolity. While given "carte blanche", to express the best that the great masters Le Corbusier and Lucio Costa with Oscar Niemeyer respectively could create, out came plans grounded in the same worn out principles of order, efficiency, regularity, and aesthetic. Irrespective of the location, culture or time, the principles of positivism and utilitarianism seem to permeate the thinking. Couched in some philosophical exegesis as if divinely enshrined, the plans reflect very little of local needs and aspirations.

The plan of Chandigarh conceived in the form of an enormous open hand, according to the designer, whatever mystic or religious connotations are attributed to the idea, fails to articulate the real needs of the people. The open hand concept is superimposed by a grid or sectors each of about 100 hectares, divided among thirteen social classes that make up the population of the city of about half a million people. While the plan does take climate into consideration, it fails to meet the needs of social community relations. The whole city is served by a commercial centre linked to an administrative centre at the top. For monumentality and aesthetic vision, it would be a fit example but,

as a living city, one fails to see how such cold technical solutions can either sense the pulse of the people, or serve their living and working environment. As one author put it, the plan for Chandigarh, hangs beautifully on the wall, but fails on the ground to serve the needs of the people.

Brazilia fares no better - in the mould of great visionaries, the architects conceived the city "ipso facto" as a bird in flight. To quote from Holford's article it "was born of that initial gesture which anyone would make when pointing to a given place, or taking possession of it: the drawings of two axes crossing at right angles, in the sign of the cross. This sign was then adapted to the topography, the natural drainage of the land, and the best possible orientation: the extremities of one axial line were curved so as to make the sign fit into the equilateral triangle which outlines the area to be urbanized."[13] The North-South axis was planned for residential development and the East-West formed the monumental radial artery linking the commercial with the political centre. It is hard to conceive anything more rational and mathematical as justification for a living city.

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[13] As quoted in Leonardo Benevolo. History of Modern Architecture. Vol. II. Cambridge: The MIT Press, 1977, pp. 758. Holford's article referred is W. Holford. "Brazilia" in Architectural Review. Vol. 122. 1957. p.399.

The plans discussed so far followed traditional theories and practices grounded in both positivism and utilitarian doctrines. The rational comprehensive planning continued to serve as the formula for organizing urban spaces in the orthodox fashion of rearranging land uses and transportation networks. A linear extrapolation of present situations to some long range future of an ideal city form.

The Cleveland Planning Report (1969) was perhaps the first planning document to shift the emphasis from the traditional planning approaches to a more dynamic process - to address some of the more pressing issues affecting the people in the city. The Plan no doubt signifies a radical approach to planning, its main objective being to address the needs of those most in need. For example,the report found that the problems the people of the City of Cleveland faced, had more to do with poverty, crime, neighbourhood deterioration, and inadequate mobility than with the traditional, almost ubiquitous, concerns of planning, land uses zoning and urban design.[14]

The Cleveland Plan ushered in a new era in planning. The emphasis now shifted to root problems facing the cities of today, problems of equality, poverty and mobility. The Plan was called the Policy Plan with no pretension of being either ideal or comprehensive but simply functional and re-

[14] See Norman Krumholz, J.M. Cogger, J.H. Linner. The Cleveland Planning Policy Report. JAIP. Vol. 41, No. 5, Sept. 1975. pp 298-304.

alistic - more of a progress report addressing some of the very critical issues confronting the people of Cleveland.

The single most important goal of the plan is stated as "Equity requires that government institutions give priority attention to the goal of promoting a wider range of choices for those Cleveland residents who have few if any choices."[15] The redistributive approach the plan takes, allows greater opportunity and choices for its citizens, specially those most disadvantaged, giving them a wider range of alternatives to identify priorites. The plan offers policy recommendation to assit decision makers, emphasizing conservation and rehabilitation of existing housing stock, over construction of new housing. Public participation is a central element of the plan and has been very effective.

Herbert Gans and eminent urban sociologist, commented that the Cleveland Plan "may signify a radical change in American planning thought and practice "and that it is both a sensitive and a sensible document which ought to be a model for planning by other cities.[16] Davidoff, author of "advocacy planning" likewise noted that the "Cleveland Plan does for intelligence and judgement what the Burnham Plan did for aesthetics." He goes on to say that "this plan is the model that will guide all planning that aims to deal ef-

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[15] Norman Krumholz, op.cit., p. 299.

[16] See Herbert Gans, "Planning for Declining and Poor Cities". JAIP. Vol. 41, No. 5, Sept. 1975, pp. 305-307.

fectively with the root causes of urban problems."[17]

The Cleveland plan while not ignoring the traditional concerns of planning, such as the land uses for example, goes on to examine them in light of their contribution to the improvement of living conditions of the people. Secondly as Gans points out, the plan avoids the arrogance of the previous plans of grand and ideal but static futures. It is less utopian and more realistic, responding to the needs of contemporary cities and advocating positively the interests of its less fortunate residents.

The plan seeks no concensus nor does it advocate a single supposedly public interest - it recognizes multiplicity of interests, and the advocacy role of the planner in providing information and making policy recommendations.

This new direction in planning no doubt calls for changes to the traditional role of the planner by expanding its concerns and seeking idealism in the reality of the situations facing contemporary cities. It is a new direction towards more relevance and results that will positively improve the living condition of people, and most importantly of those most in need.

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[17] See Paul Davidoff. "Working Toward Redistributive Justice". JAIP. Vol. 41, No. 5, Sept. 1975, pp. 317-307.

Chapter V

CONFLICTS IN THEORY AND PRACTICE OF PLANNING

> "If a man will begin with certainties he shall end in doubt; but if he be content to begin with doubts, he shall end in certainties".
>
> Francis Bacon.

5.1 PERCEPTION AND REALITY

One of the perennial challenges that the planner faces is identifying and defining planning problems. What constitutes a problem is very much a function of the definer's perception of reality, as well, as a function of the planner's cultural milieu.

To perceive is to see what exists. What exists is to some extent describable and endowed with certain recognizable characteristics. This is the meaning of perception to the common man, and to him it may also be reality. In philosophy, perception and reality are both metaphysical propositions and as such are rooted in the theories of existence. In planning, however, the notion of perception and reality do not necessarily resemble either the common man's view nor the philosophical point of view. In fact the word percep-

tion is not even a term generally used in planning. There is the belief that what 'is' is indeed 'reality'. "Reality" in planning may largely be an image imposed and defined by the observer as a construct of what he wishes, rather than what 'is'. The observer perceives a problem in light of possible solutions and techniques available to him. Planning problems are thus indentified and defined in terms of what resolutions are necessary to achieve the objectives. Planning problems as a result become an affirmation of a desired end-state as perceived by the planner.

Planning is generally based on the assumption that the planner has a complete and true understanding of the nature of the problem. This assumption is seldom true. This in turn presents a conundrum; the philosophical pursuit of completeness could lead to a road of no return, while problems in the real world await to be resolved.

If, however, one approaches a problem cognizant of the fact that it represents only one or a partial aspect of reality, or that it is only a perception; then the nature of a solution takes a different form. Further, the approach recognizes human limitations and it is specific in terms of time, location and a cultural milieu. Unfortunately, planners may approach problems not only with preconceived ideas of the problem and in some cases even solutions; but more importantly, convinced that their ideas represent the whole problem arrived at with a full and comprehensive understand-

ing. Even if such a posture is required by the planning methodologies in use, it does not make the posture valid or right. The initial problem formulation reflects at best only a partial understanding. The dilemma is the dichotomy between perception and reality. Perception is easily grasped but reality continues to elude us. Kierkegaard had argued that it is not moving from reason to belief but from doubt to belief that is more relevant; doubt, that comes not from the belief that human understanding is limited or is incapable of understanding everything, but because the human mind or intellect does not in itself constitute truth, in as much as everything that we see, does not constitute proof of reality.

Paul Watzlawick suggests that "Man has an apparently very deep seated propensity to hypostatize reality, to make of it a friend or an antagonist with whom he has to come to terms".[1] He goes on to postulate three levels of abstraction that take place in experiencing reality. At the first level, knowledge represents sensory knowledge, wherein neither the past nor the present provide any clue. The second level is based on the first level knowledge, but also is concerned with "meta-knowledge". The third order of knowledge represents the synthesis of the first two. In other words, "reality is what we make of it".[2]

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[1] Paul Watzlawick, et al., Pragmatics of Human Communications. New York: W.W. Norton and Co. Inc., 1967. p. 259.

Berger and Luckmann contend that humans, unlike other higher mammals have no species-specific environment. They argue that there is no such thing as a man-world in the same way we speak for example of a "mundo canis".[3] This is a very important construct, as we tend to believe that the world is only what we see and that it is a man-world. Berger and Luckman argue that the everyday reality is in fact only a social construction of reality, that is people give phenomena a certain category or reality which is both subjective and objective. They contend that our perception represents a socially constructed knowledge, and that is what reality is all about.

The problem of conceptualizing how we conceptualize reality has plagued many a great mind and it might be appropriate to seek insight from some historical wisdom. What is discussed in the following section, represents a cross-cultural perspective and is presented with a view to approaching our understanding of the reality perception.

Without venturing into the metaphysical domain of inquiry, an attempt is made to gain a cursory understanding of several distinct schools of thought. The choice of schools is determined not by comprehensibility but by their relevance to the problems in planning.

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[2] Paul Watzlawick, et al. op.cit. pp. 260-261.

[3] Peter L.Berger and Thomas Luckmann, The Social Construction of Reality. Harmonsdworth: Penguin Books Ltd., 1971. pp. 47-128.

The crux of our question is twofold: first, is a problem we perceive real in the sense of being absolute truth? secondly, is it perceived the same by others? In contextual terms, it amounts to the prime question: how does one formulate a conception of the universe? Heisenberg noted that "what we observe is not nature in itself but nature exposed to our method of questioning".[4]

According to Hegel, everything in this universe can be comprehended in terms of an absolute or objective mind, and that the question can be represented as a series of dialectical arguments that goes on in the universe until the achievement of complete understanding or truth.[5] Hegel maintains that since the world is ruled by principles of contradiction, it is through the ongoing resolutions of these contradictions in form of thesis - antithesis and synthesis, that the objective or absolute understanding of the universe could be achieved.

> "In every distinguishing situation each pole is for itself that which it is, it also is not for itself what it is, but only in contrasting relation to that which is not".[6]

Hegel's solution is presented by three laws:

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[4] See Werner Heisenberg, Physics and Philosophy. London: Allen and Unwin, 1959.

[5] See G.W.F.Hegel, Encyclopaedia of Philosophy. Trans., Gustav Emil Muelle New York: Philosophical Library, 1959.

[6] See G.W.F.Hegel, op cit.

1. The law of unity of opposites.
2. The law of negation of negation.
3. The law of quantity transformation into quality and vice-versa.

The first law represents the thesis-antithesis-synthesis proposition - wherein he contends that for every attempt at formulating a thesis about the universe there is always another formulation contrary to the first thesis which is antithesis. This reconciliation between the thesis and the antithesis produces a synthesis - incorporating the partial truths of both the thesis and the antithesis, and which itself becomes a new thesis. This dialectic is based on the premise that both thesis and antithesis only represent partial truths of the absolute phenomena. It is a process Hegel notes, that resolves conflicts in society and directs all historical change. In the second law of negation of negations, the processes of nature begin and end in life-death sequences, though not necessarily in a continuum. The third law of transformation of quantity into quality and vice-versa represents the changing nature, the refining process of achieving or approaching absolute 'truth', the quintessential state. To Hegel, therefore, reality represents a dialectical process beginning with thesis and culminating eventually in absolute truth or reality. It is this principle of conflict resolution that represents the evolutionary process of growth to a more absolute state. It is what He-

gel calls the basic law of nature, it is historical reality.[7]

On the other hand in Vedantic[8] philosophy of India, which is based on ancient scripture of Hinduism, the concept of reality is seen in the unity of the ultimate "Brahman" - the creator, supreme being or godhead.

The Vedantic dialectics are also based on three axioms, not too dissimilar to those of Hegel. They are as follows:[9]

1. The doctrine of "Maya"..
2. The doctrine of involution and evolution.
3. the doctrine of immanent change.

The doctrine of Maya essentially reflects a multiplicity of existences. It holds that reality is an illusion, a changing perception, based on "airdya" or unknowing. Maya always remains a perception sometimes also called delusion "moha" because we fail to recognize the oneness of the "Reality". Absolute reality would thus be somewhere between the

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[7] See G.W.F.Hegel, op cit.

[8] The word Veda in Sanskrit means knowledge and is associated with the teachings of Samkara in the 8th Century A.D., although Vedantic philosophy is of much greater ancestry.

[9] Swami Ranganathananda, The Scientific Approach to Religion. and also his book Science and Religion. Bangalore: Bangalore University, 1977. See also T.R.V.Murti. The Central Philosophy of Buddhism. London: George Allen & Unwin Ltd. 1970. p 302.

cosmic illusion "maya" and beyond human experiences as conditioned by "karma" the creative force of life. Existence thus becomes an illusion.

The doctrine of involution and evolution is a theory of birth and rebirth rather than life-death. It is the natural order of all life, a cyclical and recurring phenomenon, representing a continuing process of change, the universal causality which is the law of "karma". "Karma" essentially determines the moral order and both the fact and the nature of incarnation and reincarnation of life. This process is signified by the syncretic triad of Gods in Hinduism: God the Creator (Brahma); God the Preserver (Visnu); and God the Destroyer (Siva), representing the beginning, the middle and the end of the cosmic cycle. The doctrine of immanent change remains basically the same as Hegel's third law. It is a progression towards "Nirvana", or "Moksa" or "Samadhi" or even "Satori" which represents the transcedental state,[10] a concept similar to that postulated by Teilhard de Chardin (1881-1955) of the evolving cosmos, an ongoing process - the "noosphere" as eventually supplementing the biosphere.[11] Evolutionism in his case, was held as a principal factor of change in the universe, affecting both organic and inorganic matter.

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[10] Swami Ranganathananda, op.cit.

[11] See Teilhard de Chardin, Phenomenon of Man. London: Balins Publishers, 1959.

In Vedantic philosophy, reality as we perceive it, represents not only a multiplicity of existences, but also a series of contradictions. "If we affirm that anything is, we must at the same time admit that it is not".[12]

The philosophy of Tao (attributed to philosopher Lao Tzu author of Lao Tzu or Tao Te Ching, circa sixth century B.C. translated as the Canon of the Way and its Attainment.), in Chinese thought, deals with contradictions and problems of reality in the dialectics of "unity of opposites", but not as a progression. It is directed at the intuitive (as distinct to rational) wisdom of man, and seeks human liberation through human knowledge. The whole of the natural system represents an interplay of opposing forces that act in unison in seeking the "Tao" - the way to the "absolute". Virtue is in nature; the right and the wrong, and the good and the bad coexist and are necessary preconditions to knowledge and existence.

> "When beauty is universally affirmed as beauty,
> herein is ugliness. When goodness is universally affirmed as goodness,
> therein is evil; Therefore: being and non-being are mutually posited
> in their emergence. Difficult and easy are mutually posited in their
> complementariness. Long and short are mutually posited in their positions.[13]

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[12] Swami Ranganathananda, op.cit.

[13] See Chang Chung-Yuan, Tao: A New Way of Thinking. New York: Harper and Row Publishers, 1975. p. 7.

It is a concept of relationship rather than of things that is important to Tao.[14] Taoism sees all change in natural systems as manifestations of dynamic interplay between two cosmic forces, the passive 'Yin' and the active 'Yang'. These two forces always exist in harmony rather than in discord as "The yang having reached its climax retreats in favour of the yin; the yin having reached its climax retreats in favour of the yang". The "Yin" and the "Yang", the passive or weak "Yin" and the active and aggressive "Yang", represent the integrative nature of man, constricting each other and maintaining the natural balance. Taoism in essence suggests that all knowledge comes ultimately from Tao, and that any human knowledge and action not derived therefrom, is to be avoided.[15]

Zen, one of the main schools of thought in Buddhism, is an integrated philosophy as well, derived from the Indian mysticism, the pragmatism of Confucianism, Chinese naturalism and Japanese ethos. It is experience-based in seeking enlightenment and in achieving "satori" or awareness, which is realizing union with reality or the higher state of consciousness.

> "When the mind rests serene, in the oneness of things...dualism vanishes by itself".[16]

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[14] Quoted by Chang Chung-Yuan, in Tao: A New Way of Thinking. New York: Harper and Row, 1975.

[15] See Fritjof Capri, The Tao of Physics. London: Fontana Books, 1976, pp.107-123.

[16] See quote in Nancy Wilson Ross, Three Ways of Asian Wis-

In Zen art, for example, chance and control do not exist in oppositions, but in relationship to each other. Art created by chance or by deliberate effort both represent spontaneous creations. It is the 'material', the human hand as much as the human 'mind' that creates art. As Watts states: "The insight which lies at the root of Far Eastern culture is that opposites are relational and so fundamentally harmonious".[17]

Unlike Hegelian dialectics, Eastern thought does not proceed through the process of thesis-antithesis-synthesis or through the juxtaposition of opposites to a higher state of being. Rather it remains in a state of self-identity in a unity of opposites representing a state of selflessness.[18]

If one were to compare the four dialectical arguments as they explain reality, one recognizes that there is as much similarity in the totality of their individual arguments as there are dissimilarities in their individual parts.

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dom. New York: Simon and Schuster, 1966. p. 137.

[17] Alan W. Watts, The Way of Zen. Harmondsworth: Penguin Books, Ltd., 1975, pp. 193-194.

[18] For a good discussion and comparative analysis see T.R.V. Murti, The Central Philosophy of Buddhism. London: George Allen A. Unwinn, Ltd., 1970, p. 302; see also Chang Chung-Uan, Tao: A New Way of Thinking. New York: Harper and Row, 1975.

The Hegelian dialectic represents an evolutionary process of growth from its simplistic form to a more complex and absolute state. Vedantic philosophy claims a multiplicity of existences always in a state of contradictions. Taoism, although it recognizes the states of opposites, does not subscribe to the evolutionary process that leads to a higher state, but contends that the next stage is simply a stage of self-identity in selfless existence. Zen claims that reality does not exist outside oneself - it is a belief in basic oneness of the universe. Enlightenment is not achieved through withdrawal from the world but by participating in it, by unison with it.

Where does this all lead us to? If like Hegel one seeks a unification of opposites through the process of intellectual synthesis one could still err in dealing with the real world. The major problem is that one could construct a model, based on intellectual abstraction, which by definition will not depict reality, but only a perception of reality. If on the other hand one subscribes to the Vedantic philosophy one accepts multiplicity of existences. This may be a logical method of indexing observations as changing subsystems of the total system. If however one follows the Tao dialectic, and pursues a stasis in unity of opposites, seeking self-realization through a selfless process, one would still not be able to deal effectively with the problem of understanding physical and everyday reality.

What one is seeking perhaps is to stay our beliefs as an open-ended system. Zen offers a better synthesis between reality and perception; neither reality, nor perception needs to be sought but simple recognition of our own existence in nature or with nature.

If planning problems are, in effect, their own solutions, and solutions are constructs of an end state, then the question of reality remains in suspension and need not enter planning dialogue. To subscribe to such a paradigm would be to deny reality and planning cannot afford to deny reality. Planning needs to understand the harmonious relationship between problem and solutions not just in explaining them but also by experiencing them. As is stated in Ashvaghosha "All things in their fundamental nature are not namable or explicable. They cannot be adequately expressed in any form of language".[19] The best way to learn is to experience - planning should experience, planning is experiencing.

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[19] See quote in Fritjof Capri, The Tao of Physics. London: Fontana Books, 1976, p. 307.

5.2 FACTS AND VALUES

The dichotomy between the world of facts and the world of values represents one of the more critical debates, and has been at the root of the schism between the means and ends in planning. It is a schism between those who emphasize pure objectivity and those who see issues of subjective nature that are most often ignored as crucial to the planning process.

Value-free planning was and is still considered the ideal, because of the prevailing belief in its objectivity and neutrality to any value or ideological postulates. Max Webber (1864-1920) often associated with the conception of value freedom (wertfreiheit) in social sciences, maintains that value-judgements which he describes as "practical evaluations of the unsatisfactory or satisfactory character of phenomena subject to our influence",[20] are not logically deducible from factual statements. That social sciences which deal with factual descriptions of phenomena, cannot establish the truth or falsity of any value-judgement. While value-relevance may intervene in the selection of subjects for study it does not however constitute making a value-judgement. He maintains that it is possible to carry out analyses devoid of value relevance and/or value judgement - that in fact analysis can be carried out independently of

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[20] See Max Webber, The Methodology of the Social Sciences trans. E. Shils and H. Finch. Chicago: Free Press, 1949, p.1.

these factors, simply on the basis of objective criteria of scientific method. In other words values become relevant only in the selection process of the object for the study, but not in the explanatory phase. He also advocates knowledge based on understanding (verstehen), understanding from within, through intuition or empathy as opposed to knowledge from without, the empirical knowledge.

Of principal concern to planners are the 'moral values' whose standards categorize objects according to moral principles. Tolman[21] distinguishes three kinds of value standards: the cognitive, which are determined by individual beliefs; the appreciative value standards, which are determined by the nature of immediate gratification and aesthetic appeal; and moral standards, which represent values or conduct that have been socially accepted and are represented by such statements as "this is good" or "this is bad". According to Tolman all these value standards in the end represent the human instincts of "discriminating, generalizing and believing and are all culturally determined".[22]

Given these beliefs, it would appear that values should be endogenous to planning activity and to planners. If an individual acquires these standards in his upbringing

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[21] Edward C. Tolman, "A Psychological Model" in Towards a General Theory of Action. Eds.,Talcott Parsons and Edward A. Shills. Cambridge: Harvard University Press, 1951, pp. 343-344.

[22] Edward C. Tolman, op.cit. p. 344.

from his cultural milieu education, and from sanctions imposed by a culture, they do indeed become intrinsic to his behaviour. It could therefore be argued whether it is justifiable to impose these value standards and moral codes which invariably manifest themselves in most planning activities, upon others. Although it could also be argued that an individual may know what is good or bad without necessarily imposing them on others, and that it is in fact possible to act value neutral, such conflicting situations place planners in serious predicaments.

This brings us to the question of choice, because values become effective only when an individual makes a decision as to the best course of action in planning. If ethics or values guide the actions or choice one makes, then this value criterion needs to be explained.

Planning as an activity is grounded in values and ethics and it is impossible to ignore their intervention into planning. Words such as ideal, good, are value-laden and constantly appear in planning reports. Most of the objectives or goals in planning are value-laden, which is the reason perhaps why no specific or all-encompassing definition can be attributed to these words. Nonetheless the need to formalize or operationalize their use in planning becomes a necessity. When planners resort to such terms as "good of society", "or good of a community", they have in mind specific interests of the parties concerned and they in fact represent a desired end state.

The realm of moral philosophy is vast and complex but nonetheless pertinent to the proper pursuits of planning. The term 'Guide to Action' is often used to imply the moral forces that determine our actions. In other words it is a guide that distinguishes between the "judgements of facts" and "judgements of values". The more fundamental distinctions are between the "self" and "others"; between the faculty of intellect and the faculty of will; between the ethic of pleasure and pain; and between the ethic of duty and utility. If one subscribes to medieval Christian theology, all things and all actions that man seeks are inherently good because man is good. It can be debated whether it is the things that we seek that are good or whether we seek only those things that are good. Utility is often equated with happiness meaning free of suffering and is defined as the highest good or the supreme value that accrues to all men. The three intrinsic and perennial values often stated are "truth", "beauty" and "goodness", and these have from time to time entered planning discourse mostly as a means of justification. But what must be recognized is that these values are not absolutes but relative concepts and have no conceptual meaning but only emotive meaning. In other words they are different from facts in as much as they have no objectivity and are neither true or false. They are in the human nature.

Whatever the nature of man, what in the end matters is the effect his actions have on others, and on the society as a whole. Imperfection in men is not a crime, Comte for example saw virtue in the fact that human nature is imperfect and varied.[23] Jeremy Bentham (1748-1833), the leader of English Utilitarians recognizing this imperfection, maintained that man's actions were motivated by his desire to secure his own pleasures, albeit for selfish reasons, and avoid his own pain, and noted that "Nature has placed mankind under the governance of two sovereign masters, pain and pleasure. It is for them alone to point out what we ought to do as well as to determine what we should do".[24] But science somehow managed to ignore this very important factor, particularly in dealing with sciences of society. It continued to emphasize facts at the cost of values.

Roszak contends that the impersonality of science is a way to distort social ethics and is indeed a myth designed to manipulate the value system and control the public interest in the name of neutrality.[25] Facts and values are often transposed and both are often couched in scientific idiom. In other words, the logic of rationality becomes the final

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[23] Auguste Comte, The Positive Philosophy of Auguste Comte. Vol.,II., Trans., Harriet Martineau. London: George Bell & Sons, 1896. p.282.

[24] See Jeremy Bentham, An Introduction to the Principle of Morals and Legislation. Oxford: The Claredon Press, 1907.

[25] See Theodore Roszak, The Making of a Counter Culture. New York: Doubleday and Co., Inc. 1969.

tribunal in determining the nature of objective and subjective inferences in planning processes. What has to be guarded against is the deification of objectivity at the cost of subjectivity which in a way represents our emotive nature. Even facts are not simply givens, they are a result of selective interpretations which means interpretation based on value system. Value therefore precedes facts and determines facts. It is in this context that the present dichotomy between facts and values need to be understood.

5.3 FREEWILL AND DETERMINISM

Man's thought process and his behaviour pattern cannot be determined mechanistically, for man is endowed with free will and is governed by his conscience. He is thus free to choose any course of action to achieve his desired ends. He is free to choose both the ends and the means to achieve them, being responsible only to his conscience. This represents the exercise of free will.[26]

The theory of "Determinism" contends that man's behaviour pattern is very much determined by his upbringing, his social milieu and generally the environment that he inhabits. He thus behaves according to the dictates or attributes of that environment. Determinism postulates a rigid world, structured, and fixed to a mathematical precision,

[26] Murray N. Rothbard, "The Mantle of Science" in Helmut Schoeck & James Wiggins, eds., Scientism and Values. New York: D.Van Nostrand & Co. Inc., 1969, pp. 159-180.

and determinate. It also includes human behaviour since man and his behaviour is simply a manifestation of natural or physical laws of nature and is as such, susceptible to measurement and determination. It represents a closed system and it is a position held, for example by some Socio-biologists. On the other hand, the theory of "Indeterminism" assumes that the universe cannot be precisely determined due to chance and probability factors inherent in the natural system.

But all this, it is argued, does not deny man's free will. Although he is influenced by his environment, he remains free to choose. For the constraints only represent restrictions on his freedom, which is different from his inherent right to exercise free will[27] freedom not only to intellectualize but also freedom to act.

The theory of Determinism is of long ancestry. The universe was regarded as rational and deterministic and subservient to an ordered cosmos that governed all phenomena on this earth. Such was the preoccupation in search of the natural order and the structure and functioning of the universe, that the inquiry, that began with the pre-Socratic philosophers, persisted to almost the twentieth century.

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[27] Murray N. Rothbard, Ibid. pp. 159-180.

The Stoics that followed Plato and Aristotle, believed that all happenings in the world, including human behaviour were rigidly predetermined. It is the Universal Order, that rules supreme in the world. It is the reason, the 'Logos' that determines all the phenomena in the world, including human behaviour.[28] Given such beliefs, very little would appear left to human free will. The Scholastics, the great precursor of which are St. Augustine and St. Thomas Aquinas, preached the doctrine of "Divine Will" as the overpowering force of determinism. At the same time they held to the belief that God endowed man with a free will and that man was responsible for his deeds. That is, they believed man chooses both his ends and the means.

St.Thomas Aquinas distinguished between Divine Law and Natural Law - the former being revealed to man by God, while the latter being evolved out of man's rational reasoning.[29] Although Scholasticism was highly rationalistic in its philosophy, basing its premises on deductive logic as the only means of searching for truth; it did, however, insert a caveat to the effect that the premises, as an original construct, were derived not through rational reasoning but from the beliefs of Christianity.[30] With such a caveat,

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[28] Bertrand Russell, History of Western Philosophy. London: George Allen and Unwin Ltd., 1975, p. 261.

[29] See Dennis Lloyd, The Idea of Law. Harmondsworth: Penguin Books, 1974, pp. 77-94.

[30] Dennis Lloyd, Ibid. p.180.

it is hard to proceed beyond the strict realms of faith; with faith of course, anything can be proven whether verifiable or not. Faith according to Kant is neither a matter of knowledge nor of opinion but "wholly a matter of morality".

Some psychologists take a different point of view. They argue that environment and past experiences are the factors that primarily govern the thinking process and behaviour pattern of man.[31] Although this represents a distinct departure from the accepted norm of determinism, it does not reject the previous hypothesis, for surely past experiences, in a way, represent the constraints of the social milieu as well. The emphasis, however, is on both the past experiences and the environment in which we live, which together formulate our perceptual and conceptual biases.

It would seem that none of these concepts disagree with the notion that man possesses some degree of free will. The point of contention, it would appear, rests in the extent to which one exercises this free will, and not what determines human behaviour. It is this free will, its nature and its characteristic, that is influenced by the environment of man's upbringing, his social milieu, his past experiences, and his systems of communication.

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[31] Bertrand Russell, op.cit., p.261.

Science fostered a different perspective about the theory of determinism and uncertainty. Although Newton himself did not fully subscribe to the deterministic theory that the Newtonian Revolution, helped establish; his Revolution did usher in the theory of 'physical determinism'. As Popper says this theory became the dogma of all the men of Enlightenment and anybody who deviated from this faith was held 'to be an obscurantist or a revolutionary.[32]

It was assumed that this theory would, in the end, not only explain all phenomena of the physical sciences, but even the behaviour of all the living organisms including man. Such was the faith in scientific theory, that Newton had so successfully formulated, that it was believed, he even saw order in infinity. The idea that science can completely understand and thereby explain the world, became an anathema to many.

If such was the case, all human actions could be precisely determined, irrespective of free will, and freedom to act. In fact, the theory represents complete rejection of the concept of free will as even existing. Chance has no place in the universe, uncertainty is non-existent; contraries and opposing positions are to be discarded. This indeed presents a very mechanical universe programmed to behave in a fixed pattern which can, a priori, be determined.

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[32] Karl R. Popper, Objective Knowledge. Oxford: The Clarendon Press, 1975, p. 212.

Among the great minds there were a few, fortunately, who did not fully subscribe to this dogma of determinism and an unquestioned faith in science. C.S.Peirce (1839-1914), for example, stated that the world was ruled by not only Newtonian physical laws but also by laws of chance and probabilities[33] In other words, Peirce held that there was no such thing as perfect determinism and that some degree of indeterminism rules the 'clocks' as much as the 'clouds'. Popper says that

> "So far as I know Peirce was the first Post-Newtonian physicist and philosopher who thus dared to adopt the view that to some degree 'all clocks are clouds'; or in other words, that 'only clouds exist', though clouds of very different degrees of cloudiness".[34]

Popper himself could be counted among the ones who rejected the theory of physical determinism. As Popper put it very succinctly, "In other words I am an Indeterminist"[35] There was no doubt that there were other great minds like Compton, Heisenberg and Schrodinger who also rejected the theory of determinism. [36] Heisenberg's (1901-1976), "Uncertainty Principle" is perhaps the best known injunction against determinism. Likewise, the "Identification Problem"

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[33] See Charles Harlsborne and Paul Weiss, eds., Collected Papers of Charles Sanders Peirce. Cambridge, Mass.: Harvard University Press, 1935.

[34] Karl R. Popper, Objective Knowledge. Oxford: The Claredon Press, 1975. p. 213.

[35] Karl R. Popper, ibid. p. 215.

[36] Karl R. Popper, ibid., pp. 212-215.

in Econometric sciences is also a recognition of the nature of uncertainties. It questions the correspondence between a model of reality and reality itself and attempts to account for the discrepancies on a hypothetical basis.

In his book, The Freedom of Man, Compton argues against the strictly deterministic world,

> If...the atoms of our body follow physical laws as immutable as the motions of the planet, why try? What difference can it make how great the effort if our actions are already predetermined by mechanical laws...?[37]

If all our actions and movements are predetermined and fixed to absolute mathematical precision, little indeed is left to our free will. Even if we attest to the existence of the free will, its function is basically meaningless under deterministic theory. The system stands closed and, as such, is not amenable to outside intervention and is not subject to laws of chance or probabilities. This, if at all, would represent a very limited view of the world and attest more to our limited understanding of the workings of the Universe and the human mind than the truth it purports to expound.

Hume, the great empirical philosopher, saw determinism in the context of cause/effect relationship; "This a general maxim of philosophy, that what ever begins to exist, must have a cause of existence."[38] Hume contends that per-

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[37] A.H.Compton, The Freedom of Man. New Haven: Yale University Press, 1935. p. 1.

[38] David Hume, A Treatise of Human Nature. Oxford: Oxford university Press, 1968, p. 78.

fect chance is the only alternative to perfect determinism. If the belief rests in intuition, Hume rejects it because he contends that intuitive belief is not valid.[39]

The Nyaya - Vaisesika epistemology, in Indian philosophy, holds that the Universe is a system of physical phenomena of living beings and these exist in close interaction with one another in time, space and 'akasa'. The order of the world is believed to be a moral order in which human destiny is governed not only by physical laws of nature but by moral laws of 'karman', the law of universal causality that connects man with the cosmos leading to indefinite transmigration.[40]

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[39] Hume, Ibid., pp. 73-82. See also A.N. Whitehead, Modes of Thought. New York: The Free Press, 1968, p.165, he notes that "the only intelligible doctrine of causation is founded on the doctrine of immanence. Each occasion presupposes the antecedent world as active in its own nature".

[40] The Nyaya-Vaisesika philosophy are really two Indian schools of thought dating back to circa third century B.C. The Nyaya is basically logic and epistemology, while Vaisesika represents physics and metaphysics. Both are aimed at the liberation of the individual self and as such are closely interrelated. The term 'akasa' means, one eternal, all-pervading physical substance, which has the quality of sound similar to "OM" in Vedantic Philosophy. The word 'karman' stands for action, physical movement. For an interesting discussion on The Nyaya-Vaisesika philosophy, see the two articles by Satischandra Chatergee on 'Early Nyaya-Vaisesika' and by V.B. Bhattacharya Nyayacarya and A. Basu on 'Later Nyana-Vaisesika' in S. Radhakrishnan, ed., History of Philosophy Eastern and Western. Vol.I., London: George Allen & Unwin Ltd., 1967, pp. 219-241.

The whole problem of physical determinism created what Popper calls 'a nightmare' because he says "it asserts that the whole world with everything in it is a huge automation, and that we are nothing but little cogwheels, or at best sub-automata within it".[41]

Popper suggests that it is not determinism versus indeterminism which is the crux of the problem, it is neither the clocklike precision nor cloudlike chance that determines all the events.

> 'What we need, for understanding rational human behaviour - and indeed animal behaviour - is something intermediate in character between perfect chance and perfect determinism - something intermediate between perfect clouds and perfect clocks'.[42]

He goes on in defence of his intermediate posture to say that "what we want is to understand how such non physical things as purposes, deliberations, plans, decisions, theories, intentions, and values, can play a part in bringing about physical changes in the physical world."[43] This is the crux of the problem that planners face when trying to deal with problems of social behaviour within deterministic mathematical constructs.

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[41] Karl R.Popper, Objective Knowledge. Oxford: The Claredon Press, p.222.

[42] Popper, Ibid. p.228.

[43] Popper, Ibid., p. 229.

Heisenberg's uncertainty principle together with the indeterminacy of quantum mechanics helped reformulate epistemology in the West. A more viable probability metaphor, suggesting chance rather than determinism, slowly gained credence and replaced the deterministic belief.[44]

5.4 TELEOLOGICAL VIEW VERSUS SCIENTIFIC TRUTH

Teleology tends to identify the behaviour of an individual or society with the purposes of the universe as a whole. It is a study of ends or goals and is based on the belief that ends or purposes in life determine the means towards its fulfillment. In other words it is a belief that everything has a "purpose" and therefore a "cause". Cause is not relevant in either directing or understanding change, but relevant where the goal also becomes the cause.

Mechanistic theory is based on scientific laws, and scientific laws, presumably, determine the workings of the universe. Thus if the workings of the universe are determined or understood through the workings of component parts and relationships to the whole, then it stands to reason that our understanding of the universe is made up of our understanding of the parts. This view is contrary, of course, to the teleological teachings or the teachings of faith and morality. While teleological explanations answer the ques-

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[44] David Miller @ Martin Starr, The Structure of Human Decisions. New Jersey: Prentice-Hall Inc., 1967, p. 23.

tion why, for what purpose, the mechanistic explanations attempt to answer the question of how. But neither, it would seem, can answer both, therefore, neither science or teleology can fully explain the workings of human behaviour. While science fails to acknowledge the uniqueness and free choice of the individual, teleology fails to adequately establish cause and effect on a rational basis within the realm and purposes of the Universe.

This debate between teleology and mechanistic theory has been going on for over two centuries, resulting in dichotomous cultural and social viewpoints. Kant, to an extent, sought reconciliation of the conflict between the concept of free will and Humes law of causality. He did so by teleological argument, that ends determine the means. He also tried to reconcile the demands of scientific determinism with the essence of man's moral obligations and the role of his intuition, by directing inquiry, not towards the "nature of being", but towards the "nature of knowing". This is a very important distinction. Kant's synthetic approach to the theory of knowledge utilized "a posteriori" justifications of "a priori" theses as a prerequisite for knowledge and knowing. This method changed the whole approach, of philosophical inquiry to that point. It now meant performing synthesis then analysis, rather than performing analysis then synthesis. Accordingly, all a priori knowledge would be regarded as synthetic, and all the a pos-

teriori knowledge was regarded as analytic.[45]

Although Kant admitted the limits of the scientific method, he also, advocated the universality of science and a pragmatic approach to the theory of knowledge. Kant distinguished between matters of fact, matters of opinion and matters of faith. Under such classification the statement that man is free becomes a statement of fact, but moral freedom is not a matter of fact, but falls in the realm of faith.

There is no doubt that all these are critical issues not only for philosophy, but for planning. Is it free will or is it determinism that in the end guide human action? Is it the ends or the means that matter in guiding social and physical change? Teleological perpectives of the universe presents a more adequate model for planning, for it directs its inquiry to determining the purpose a goal-directed activity, rather than cause alone.

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[45] Humayun Kabir, 'Immanuel Kant', in S. Radhakrishnan, ed., History of Philosophy Eastern and Western. London: George Allen @ Unwinn Ltd., Vol. 2, 1967, pp. 238-262. Kant develops these ideas in his books, The Critique of Pure Reason and The Critique of Practical Reason.

5.5 FREEDOM AND PLANNING

"Freedom", said Jean Paul Sartre, "is what you do with what's been done to you". The concept of freedom has been subjected to a plethora of definitions ranging from strict legal definitions to very subjective moral conceptions of freedom. It has been construed as freedom from restrictions or freedom to liberty. It has become as much a cry against domination, slavery, injustices, inequities and oppression, as for, rights, liberties and pursuit of happiness.

The issues of freedom and self-determination have entered the planning arena where, for example, the powers of emminent domain of expropriation, of resource use and development are contested, with equal zeal as the rights against nuisance, noise and aesthetic zoning, are disputed.

One of the most powerful enigma to change and development has centered around the ideological conflict of freedom from planning versus freedom to plan.

The mid 1900s saw the split manifested by the great debate that raged between Friedrich Hayek and Barbara Wooton. The protagonists in the debate were Friedrich A. Hay-

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[46] See Friedrich A.Hayek, The Road to Serfdom. Chicago: The University of Chicago Press, 1944.

[47] See Karl Mannheim, Freedom, Power and Democratic Planning. London: Routledge and Kegan Paul Ltd., 1951.

ek,[46] Karl Mannheim,[47] Barbara Wooton,[48] Ludwig von Mise, Rexford G. Tugwell, Herman Finer,[49] and others. Primarily, it centered on the question of reconciliation between 'planning' and 'democracy'. In other words, can planning be reconciled with democratic ideology?

Hayek, a political economist, titled his book Road to Serfdom. Planning, he contended, was a centralist activity designed inevitably to lead to suppression of individual liberties, to dictatorial control and to eventual serfdom. Wooton, an economist presented an opposing view in her book Freedom under Planning. She rejected the argument put forward by Hayek and contended that planning indeed "may be defined as the conscious and deliberate choice of economic priorities by some public authorities". She went on to emphasize the nature of democratic administration of economic affairs, which according to Wooton leads to freedom of choice, freedom to produce ,to spend, freedom of enterprise, and to consumer sovereignty.

The basic premise of Wooton's argument is the belief in some harmonious good in line with utilitarian ideology. What she is arguing is for economic freedom that can be realized through planning.[50] But such a posture does not nec-

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[48] See Barbara Wooton, Freedom Under Planning. Raleigh: University of North Carolina Press, 1945.

[49] See Herman Finer, Road to Reaction. New York: Little Brown @ Co., 1946.

[50] Barbara Wooton. Op. cit. pp.6-8.

essarily guarantee individual freedom according to Hayek. The debate in essence amounted to who would benefit from the economic gains that could be derived through planning, and how the resources could be distributed among the various competing users.[51]

Sociologist Karl Mannheim argued in favour of planning. Rational Planning he maintained was "planning for freedom" and the proper pursuits of man's subjective impulses, thus providing greater freedom for cultural creativity. He opposed an unregulated society of Liberal ideology which he felt was producing just the opposite - a totalitarian dictatorship.

According to J.R. Lucas , "The central sense of freedom is that in which a rational agent is free when he is able to act as seems best to him without being subject to external constraint on his action".[52] But such a tenet presents difficulties when viewed in the context of a community. While trying to strengthen individual freedom, it weakens the total freedom of the community and in fact it might even work against it. Such a definition of freedom is, in a sense, atomistic in not recognizing the difference between individual freedom and community freedom. It is not to ar-

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[51] John Friedmann, "From Polemics to Disspassionate Analysis", International Social Science Journal, Vol. 11, No. 3, 1959, pp. 327-339.

[52] J.R.Lucas, The Principles of Politics. Oxford: Claredon Press, 1966, p. 144.

gue against freedom, but to emphasize the notion of responsibility that goes with individual freedom. In essence freedom places very heavy responsibility on the individual.

Pursuit of freedom can also mean pursuit of alienation - the more an individual removes himself from the community in seeking his individual freedom, the more he differentiates and isolates himself from the larger community. It is a dilemma that the present economic system tends to perpetuate. On the one hand, there is development towards larger and larger economic units that seek aggregate good. On the other hand, there is pressure to pursue and seek individual good and individual freedom, developing individuality and the right for self-determination. Such ideas are also expressed by philosophers and sociologists like Marcuse (1964), Goodman (1960) and Laing (1975).

Planning, on the one hand, seeks the public good and on the other, individuality, by attempting to safeguard individual rights through design, spatial differentiation, zoning and other regulatory measures, but in the process suffers from ineffectiveness, indifference and in the end satisfies neither objectives. Whatever the purpose of planning may be, it can easily be transformed into indiference and whatever the cause for action may be, it could easily be translated as an inevitable consequence.

In actuality, 'freedom to' and 'freedom from' represent two sides of the same coin. Full freedom is constrained by actual possibility. 'Freedom to' is a concept akin to liberty, while 'freedom from' is akin to immunity or security.[53] Both liberty and immunity are also interrelated - to be at liberty or free to take a certain action could also imply immunity from arbitrary interference. Thus the two concepts of freedom are strongly interrelated. If one is not 'free from' punishment, one is not generally 'free to' act or take action. This represents freedom of an individual vis-a-vis the law (legal freedom), and not to his fellow man, and constitutes the most basic form of freedom.

> "The combination of immunity from coercion for the law-abiding subject with liberty to do anything that has not been prohibited by law, we may call Constitutional Freedom or Freedom under the Law."[54]

But freedom under the law guarantees liberty "freedom to"; but "freedom from" negates the very concept it guarantees. It, thus, presents a conditional clause similar to a contractual arrangement that one is free to do anything

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[53] Freedom from represents a negative form, while Freedom to represents a more positive and creative concept. In Buddhist philosophy the concept of freedom from is best exemplified by the idea of "Nirvana" which means freedom from earthly suffering, specifically it means freedom from ignorance, selfishness and suffering, and in the positive sense it means attainment of wisdom (prajna) and compassion 'karuna', while freedom to, could be described by the idea of "Ahimsa" the liberty to be born again. In Hinduism a similar belief also exists, freedom from signifies release from the cosmic laws of "karma" to positively achieve "Moksa" meaning deliverance.

[54] J.R. Lucas, op.cit. 1966, pp. 144-242.

one wishes provided it is legal. It is this latter constraint "freedom from" that poses most of the problems in planning, and it is the specification of these limitations that constitute the crux of the problem.

In planning, the pursuit of freedom is a very tenuous quest. Popper contends that "freedom defeats itself if it is unlimited",[55] It is for this purpose of control that laws exist both to curtail the abuse of freedom and protect the freedom of the individual. Thus if the public are to enjoy freedom they must likewise be controlled by law in the pursuit of this freedom - protection is necessary if freedom is to be effectively enjoyed by all people equally.

Freedom, says Lucas, is a basis of rationality of action of achievement; freedom is a good. Freedom permits one to "actualise one's potentials as a person" and determine one's future, while not to be free would constitute not being human, and not being able to realize the full meaning of man's purposes in life.[56]

Surely, it can be argued that man is neither wholly rational nor is he wholly free. Rousseau said "Man is born free, and everywhere he is in chains".[57] Freedom and democ-

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[55] Karl Popper, The Open Society and its Enemies. Vol.II., London: Routledge and Kegan, Paul. 1974. p. 124.

[56] J.R. Lucas, op.cit., 1966, p. 144.

[57] See Jean Jacque Rousseau, The Social Contract. Trans., Maurice Cranston. Harmondsworth: Penguin Books, 1977 (1762).

racy are products of reason. They exist because man believes that it is rational to be free and to be democratic. Like R. Niebuhr noted, democracy was necessary because of man's capacity for injustices, and that democracy exists because of man's capacity for justice. The same could be said of freedom.[58]

> Every system of Law is in contradiction with the principle of absolute licence for very good reasons the most important rights and authorities are conferred in the form of accountable offices, not legal privileges with absolute discretion.[59]

From the foregoing quote one could surmise that one's actions are limited and freedom is curtailed, and that freedom implies responsibility. But at the same time one is not prevented from criticising the institutions that were developed by people in pursuit of freedom. This is so because freedom represents a recognition of existing structure, institutions and moral codes that regulate our lives and permit us to be free, or permit us to exercise our freedom.

The danger in planning is that as planners we recognize our freedom but fail to recognize freedom of those for whom we plan - we do in fact restrict freedom in the very act of seeking freedom, supposedly through planning.

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[58] See R. Niebuhr, Man's Nature and His Communities. New York: Charles Scribner's Sons, 1965.

[59] J.R. Lucas, op.cit. p. 353.

It is easy for planners, particularly, to believe themselves to be morally and intellectually superior in seeking public welfare. It is similarly easy to create grandiose plans for others, in the name of freedom, but difficult to accept that by planning we have also imposed restrictions on the freedoms of others, all in the name of "good".

Incomplete control and imperfect intelligibility, says Lucas are the inevitable corollaries of freedom and are often seen as blemishes. But he goes on to say, to have complete mastery over the world as one has over one's thoughts is to be God. But if one is not prepared and cannot be God, then one must accept human fallabilities including our inability to have everything rationally justified to one's full satisfaction.[60]

Sartre argued that freedom to man, meant condemnation of man. This quite opposite belief he put succinctly in his famous statement "condemned to be free".[61] True moral freedom, Sartre argues can only be realized when all the human antagonism has dissipated and man recognizes the cause and effect of his own destiny and freedom.

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[60] J.R. Lucas, op.cit., 1966, p. 354.

[61] Walter Kaufman, Without Guilt and Justice. New York: Peter H. Wyden,Inc., 1973, pp. 2-34, and p. 218.

The major constriction of the concept of freedom - whether from or for - is the scientific attitude with which we attempt to define it. By its very nature, the concept of freedom is of little value to science since science is incapable of dealing with social diversities, but performs well when common or general behaviour is manifest. Waddington's assessment that science is best qualified and designed to run a totalitarian state is indeed valid.[62] If freedom means control and planning means control, the problem that arises is how to reconcile the two, especially if both are necessary to fulfill a want.

5.6 METHODOLOGY IN PLANNING

5.6.1 INTRODUCTION

It is important to distinguish between two terms that appear ubiquitously in planning literature and are the cause of considerable confusion. The terms are Process and Method.

A Process could be described as a continuum of changes brought about by a series of considered actions. It may or may not be end oriented, but is definitely concerned with means. Process also denotes being in motion, being in a state of dynamic change. It may involve the design and implementation of a course of action or strategy of choices to seek desired ends. A process may also be a kind of "happen-

[62] C.H. Waddington, The Scientific Attitudes. (an article).

ing" or "letting it happen" according to the diverse wishes of the people.

A Method on the other hand, is a mechanism incorporatated in a process to organize or bring about change. A method offers procedures for conducting research and enquiry in a systematic and logical way using techniques that emphasize rationality, order and efficiency of the thought process. It is a tool of science.

Planning discourse has defined methodology with an emphasis on method and procedural rules, rather than on the normative issues and effective results. The question of how has dominated the planning enquiry at the cost of what and why. This has been so pronounced, that we have been compelled to design and plan according to a body of rules and regulations and to think within the given modes and styles endemic to the scientific paradigm.

The restrictive and rigorous nature of scientific method, presents formidable problems in its application to planning. Scientific method is hampered by mechanistic characteristics, its linear dimensions, its insensitivity to the subjective aspects and its causal and deterministic assumptions.

It pursues objectivity, for example, by simply associating the process with an independent observer as an instrument and by working through the process of analogous

models. Both means may not represent objectivity, and may in fact falsify reality. Objectivity presupposes the existence of absolutes and agreement amongst all concerned, even in a pluralistic society. Indeed science and its methods seek perfection not by studying a problem in its native state, but by reducing it to precise measurements within controlled parameters. In other words, by dealing with generalities by the use of specifics.

Scientific method is a method for formulating concepts, testing hypothesis and constructing theories. It cannot help either to identify problems nor to construct hypotheses. It is concerned with form and validity and how the hypothesis is derived. In fact Bacon, Descartes and Hobbes all believed that "method" was the key to attainment of knowledge.

If we look at concepts we find that they are based either on things which are factual and static or on things called events, which are dynamic. But to extract these concepts from things, whether static or dynamic, calls for inductive and deductive processes according to scientific dictum. But we also know that the process also relies on some "a priori" conception of things that one wishes to conceptualize or hypothesize.

Bertrand Russell, maintained that it takes a lot more than mere organization of data to generate concepts.

Concepts are merely ideas without description and it is important to distinguish between conceptions and perceptions. We must first be able to perceive the same things in order to have the same conception of the thing. Poincare considers it impossible to carry out an experiment without a preconceived idea. Popper contends that it is from conjecture that hypotheses are generally formulated, and in fact he says without such conjectural or intuitive concepts however vague, it would be hard to know what exactly to observe in the first place. Hobbes in his opening remarks to Leviathan notes that:

> "The Original of them all is that which we call SENSE: (for there is no conception of a man's mind which hath not at first, totally or in part, been begotten upon organs of sense). The rest are derived from the original".[63]

It is also argued that all sciences depend to some extent at some stages of their inquiry on commonsense and intuition at least in their preliminary classification stage. If so it would appear that intuition does play a very important role in the scientific method and knowledge development.

Going through the various stages of scientific method one finds that scientific method is inherently an intuitive process rationally systematized and validated. The observation stage is based on guess work, intuition and

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[63] See Thomas Hobbes, Leviathan. London: Basil Blackwell, 1976.

commonsense. It is an attempt at simple descriptions and comparisons of things observed. The classification stage of the scientific method consists of identifying groups that have the greatest communality and will provide the most information. It is principally a reductionist process, and leaves out those aspects ouside the fixed parameters of science whether relevant or not. The causality stage is fundamental to the scientific method; but it is a discriminating process. It differentiates regular and reliable aspects from irregular and the unreliable ones. Those aspects that are unique and those that do not conform are excluded. Verifiability is provided by experimentation and observed data and, according to Popper, it is based on the theory of falsability. All that can be done is to prove that a theory is false, since it cannot be proven that it is right.

Further if concepts are derived by intuition, if logic is applied to deduce theorems, and if empirically validated theorems become laws or theory; than it would follow that if the theory is true than the axiom would be true. By definition, concepts are evolved by a process of intuition or conjecture and as such cannot be proven true or false. Therefore, it would follow that theory cannot be stated as true or false but can only remain simply as a proposition. Truth resides in the meaning of the word rather than in the facts, and as such only tautological statements could claim to be true or false.

Scientific method was not designed to establish truth but rather to invent truths. This particular characteristic reduces the relevance of scientific method to planning. Truth of "a priori" nature cannot be proven nor disproven by experience, particularly in the ethical domain. One knows that happiness is better than misery and that knowledge is better than ignorance, but no conclusive proof can be derived for either assertion.

The central question is; do we need facts or do we need purpose? Is it the cause we are seeking or is it the purpose? It is evident that while deductive method will not add new knowledge, the inductive method will not provide conclusive proof. Thus the scientific method may not in all cases be a relevant means of approaching planning problems.

Urban problems are perhaps empirically discernable but they can hardly be ordered rationally to fit a mathematical formulation. The residual problem-solving nature of planning inquiry; that is, defining problems in terms of what it is not, negates many methodological formulations.

Social theorists like Durkheim (1858-1917), Weber (1864-1920), Simmel (1858-1918), Mead (1863-1931) and others saw the danger of over emphasis on method, particularly in social sciences. They argued that distinction needs to be made in sociological methods of analysis, between those elements that are value-laden and those that are not. They

further argued that one needs to go beyond the statics, to understanding the workings of society, the social processes, and the conflicts and cooperations that are endemic to society. Weber notes that "there is no absolute objective scientific analysis of culture or ...of social phenomena independent of a special and "one-sided" view-point according to which expressly or tacitly, consciously or unconsciously - they are selected, analyzed and organized for expository purposes".[64]

Lonergan, distinguishes between two forms of scientific methods, or two forms of knowing as he calls it. These are the "common-sense method" and the "empirical method". The former method is descriptive in the way in which it deals with things as they relate to man, and the latter, the empirical method is explanatory of the way in which things relate to each other. Lonergan goes on to note that " method consists in ordering means to achieve an end". But how, he questions, "can means be ordered when the end is knowledge and the knowledge is not yet acquired?".[65] What is suggested is need for a different method for directing planning inquiry; a different approach that can explain and determine the purposes of planning, rather than simply reducing and analysing component parts in isolation, devoid of a synthe-

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[64] Edward Shils and Henry Finch eds., Max Webber on the Methodology of Social Sciences. New York: The Free Press, 1949, p. 72.

[65] J.F. Lonergan, op.cit,. p.44.

sis or a synoptic approach.

5.6.2 METHODOLOGICAL ECLECTICISM

Eclecticism is imbued with a number of definitions, each representing a cluster of thoughts rather than any single exclusive or specific definition. A search for synonym would not be fruitful given the nature of the idea it represents. Theoretically, eclecticism can co-exist with the search for a single goal or multiple goals - and it can legitimize various satisficing levels that planners seek to achieve. Eclecticism would imply borrowing without adhering to any single principle. Methodologically, the science of "Muddling Through" or "Incrementalism" postulated by Lindblom and others recognize the inherent nature of eclecticsm without making it explicit. Many of the planning methods and techniques currently in use are inherently eclectic in their methodologies.

Eclecticism in architecture, for example, is credited with embodying diversity of styles focussing on a purpose and a coherent design. Eclecticism is an approach that recognizes creation of diversity as a legitimate activity while not seeking in the process to foster or impose any single idiom. Neither does it accept or recognize one. It achieves unity through a purposeful, and meaningful, borrowing.

Theoretically, eclecticism presents a method of discourse that permits a selection and inclusion of methods that fit best, without seeking to impose any fixed design form. It is not a philosophical science but a paradigm to deal with diversity and complexity. at the same time.

Planning does not have its own methodology as we have argued at length in previous chapters, primarily because of its transdisciplinary and interdisciplinary nature. It borrows freely from other related and at times not-so-related disciplines or fields of study, seeking always to adapt to the problems at hand.

The reasons for eclecticism are primarily a result of a number of constraints inherent in planning theory and practice, namely:

1. The inherent inability to discriminate between the perception and reality of urban problems.
2. A lack of consensus regarding the nature of the urban phenomena, and the parameters of its operations.
3. The lack of sound theoretical foundation that is experience based.
4. Unnecessary constrictions and irrelevancies imposed by the scientific methodologies.
5. The inability to confirm through experimentation the basic assumptions and conclusions.

In as much as these concepts are derived from studies on planning topology and homology theory, they are equally applicable to planning theories and methodologies.[66]

The need to be able to select from a whole spectrum of theoretical and epistemological theories on the basis of its appropriateness to the problem at hand, appears to be a valid position. The alternative is strict adherence to a particular theoretical or methodological strategy, but this has frustrated planning objectives. The need for methodological pluralism or ecclecticism and for more open ended approaches, have been advocated by many, more importantly by Feyerabend in his theory of "methodological anarchism" discussed earlier. Kuhn talks of "revolutionary sciences" that might be able to look anew, generate new methods, plural models in our search for a new paradigm.

Although it is not scientifically prudent nor acceptable to pick and choose to suit convenience, it is nonetheless a valid proposition. But Kuhn also criticises such approaches as what he calls "weak sciences", because they lack any agreed upon theoretical base, and are essentially made up of intuitive generalizations that lack parsimony and coherence.[67] It is not only the vast range of problems that

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[66] Some of the above five points are taken from Atkin's "Homology Theory". See R.H. Atkins, "From Co-Homology in Physics to Q-Connectivity in Social Science". International Journal of Man-Machine Studies No. 4, 1972, pp. 139-167.

[67] See Thomas Kuhn, The Structure of Scientific Revolution.

are considered within the legitimate ambit of planning domain, but the range of principles that are used to solve them that inhibits any single theoretical base. The need to integrate theory and practice in any method becomes critical even if it is based on intuitive generalizations. This would not be unique to planning since disciplines like medicine, engineering etc., have in fact institutionalized practice in their educational models. Eclecticism would thus appear to be an indeed a legitimate activity in planning theory and practice.

5.6.3 TECHNIQUE

It has been said that the main preoccupation or function of science has been to enable us to know things and to enable us to do things. But with the rise of technology, technique has become the means in the determination of the ends be they social, economic, or physial. It has become the final arbiter of what we experience or the way we experience and observe the external world. The magic of technology has reformulated our world view. Problems and solutions are cast in purely technical terms devoid of any value judgements or political exigencies. Two of the greatest architects and urbanists of this century, Walter Gropius and Le Corbusier, were so enamored by technology that they introduced the "International Style", as a product of technol-

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Chicago: The University of Chicago Press, 1970.

ogy dominated machine age. The 'Bauhaus' (1919), founded by Gropius was a machine shop, that became the fountainhead of industrial design and influenced much of the architecture and planning in this century. It was an attempt to fuse art and industry/technology as a new medium of design. The belief that technology can solve all human problems is, at best, a delusion. Our obsession with technology in search of power and control over things and people could well alienate us and cause greater conflicts and confusion.

Technology has been critically examined by such authors as Hannah Arendt (1958), Lewis Mumford (1963), Jacques Ellul (1964), Herbert Marcuse (1964) and others. They have drawn our attention to the dangers that await a society wholly dependent on technology. The technological society, they warn us, will dissipate humanness, and its pervasive influence will transform man into a machine.

Technology is defined in a broader context as 'the organization of knowledge for the achievement of practical purposes'.[68] Even in this broad context, its dangers if pursued exclusive of human values remain a threat as much as a blessing. Inasmuch as it provides new opportunities, it also restricts men to the means which technology offers. Technical decisions or solutions have come in direct conflict with the real social and economic choices.

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[68] Emmanuel Mesthene, Technological Change. Cambridge, Mass.: Harvard University Press, 1970 , p. 25.

But this flirtation with technology is evident in more and more human activities. Governments in the mid 60s' to mid 70s' in particular, were favouring technical decisions to replace the forces of the free market system. This posed very serious problems, given the fact that governments were increasingly involved in planning in almost all aspects of life. While since then, there has been a growing disenchantment with such public intervention and a growing demand particularly in the Western Industrial democracies to return to the freemarket system; most of the developing countries of the world however, continue to be enamored by technology, and continue to seek technical solutions to problems of even social nature.

The principal danger is that technical decisions are, by their very nature, technique-oriented. They use techniques to produce technical solutions that are, in turn, technique-dependent. John K.Galbraith in the New Industrial State (1967), speaks of "Technostructure" the organized intelligence he says that is becoming more and more responsible for planning. It attempts to serve its own ends, and often at the cost of majority good, or the welfare of the society it purports to serve.[69]

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[69] See John K. Galbraith, The New Industrial State. New York: Signet Books, 1968.

Kenneth Boulding also alerts us to the technological trap; specifically the inability "to develop a genuinely stable high level technology which is independent of exhaustible resources". In other words technology has the tendency to grow at the cost of resource depletion.[70] Barry Commoner in the Closing Circle (1972), likewise holds technology responsible for environmental degradation. The process could lead, he claims to eventual catastrophy if not checked. Jacques Ellul in The Technological Society (1964) argues, that technology has posited itself to being an autonomous force capable of destroying human values. It will lead, he claims, to the eventual domination of man by machine and, in the process becomes self perpetuating, leading to the danger of rendering man, in the end, incapable of controlling his own creation.

Technology's infinite capabilities have been glorified not because of its benefits to man, but because of its sheer potential and its innate beauty that schools such as the Bauhaus[71] dogmatized as epitomizing architectural purity and expression. The danger of creating a 'Technopolis' as Nigel Calder describes it, is indeed real. A society moulded and manipulated by scientific and technical innovations would simply reduce man to machines - to tools in the ser-

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[70] See Kenneth Boulding, The Meaning of the 20th Century: The Great Transition. New York: Harper and Row, 1964.

[71] Bauhaus was a school of architecture founded by Walter Gropius in 1919, and emphasized machine aesthetic.

vice of the machine he helped in the first place to create.[72] The "City Efficient" movement that dominated planning in the early 20th century, discussed earlier, was as much a product of technology as of rationality. The design of the road system and the physical layout of the city conformed strictly to the needs of technology, and machine design. A city as a machine for living was the belief that guided planning design and does so in many cases even today.

It is not that technology per se is the destructive force, it is the irresponsible use of it and over dependence on it as the judge of social behaviour, that is at the root of much of the discontent associated with the so called "technological solutions". Technology can be a blessing as much as a curse depending how it is used. Hegel noted that the conflicts in life were not between good and bad but between good with good.

5.7 HOLISM AND ATOMISM

The principle of Holism dates back to Roman times and has persisted since, but only recently has it come to the prominence as an important theory in understanding complex systems. Atomism goes back to the Greeks and was first articulated by Leucippos and later developed by Democritus and Lucretius in his poem De Rerum Natura (c.55 B.C.).

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[72] See Nigel Calder, Technopolis. New York: Simon @ Schuster, 1970.

The most recent debate centers on the question of whether social phenomena is an aggregate of individual actions or is it a collective behaviour. Adherents of the former school of thought are classified under the theory of "Methodological Individualism", while the later school of thought is known as "Methodological Holism".

The term "Methodological Individualism" was originally coined by F.A.Hayek and K.Popper who posited the theory as a safeguard against the dangers of planned society that is controlling and reconstructing society as a whole, that Holism was to an extent advocating. "Methodological Individualism" was advanced by J.W.Watkins, one of its strongest advocates. He maintained that social processes must be determined by two principles; 1) the behaviour of participating individuals and 2) their operational situations. The Individualist maintain that society is made up of individuals and that social phenomena is created by the individuals, by their attitudes and actions and not by society as a collective whole. Its roots are in the theory of "Atomism" (Reductionism) which is based on theory of nature and states that the universe is made up of individual atomic facts. Their basic premise is that:

1. The whole is equal to the sum of the individual parts.
2. The individual parts determine the whole.

3. The whole can be reduced into component parts without serious loss of meaning.

Watkins describes "Methodological Individualism" as a method of sociological explanation, a kind of methodological rule, by which the conditions and circumstances of individuals in society determine the meaning of social behaviour.[73]

"Methodological Holism" presents a rival thesis and maintains that social phenomena must be understood holistically. The concept of Holism is also of long ancestry dating back not only to the Romans but also to the roots of Hindu and Buddhist philosophies that conceived of cosmos as unity - one divine reality. Its more recent version evolved from biology and was first expounded by J.C. Smuts (1926), and the Gestalt school of psychology. Smut's theory was based on the theory of evolution as a creative process that successively brings into existence new wholes. The holistic approach maintains that social events and all their manifestations should be studied as wholes. It is social wholes and not individual elements that constitute social phenomena.[74] Holism is generic of the nature system as it evolves into greater and greater wholes and in process becomming more and more complex. It is he says "fundamental, synthet-

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[73] J.W.N. Watkins, "The Alleged Inadequacy of Methodological Individualism". Journal of Philosophy. Vol. LV, 1958.

[74] See J.C.Smuts, Holism and Evolution. London: Macmillan @ Co., Ltd., 1926.

ic, ordering, organizing and regulating activity in the universe".[75]

B. Pascal (1623-1662) perhaps stated the concept of 'Holism' best in his book Pensees, in which he notes " Je tiens impossible de connaitre le tout, non plus que de connaitre le tout sans connaitre particulierement le parties." Holism is based on the assumption that whole patterns 'cannot' be reduced into parts without serious loss of meaning. Holists also maintain that a whole is not equal to the sum of its parts. Further they believe that although social phenomena are ontologically derived from actions and attitudes of individuals, the two are not identical. It does not, they contend, mean that society is not made up of individuals or that society can exist without them. Rather, they suggest that the actions of society as a whole cannot be imputed to the individual.

Individualists maintain, however, that change can only come from individuals; social wholes cannot do anything independent of individuals. In an epistemological sense, Individualists hold that one can observe the behaviour of individuals but not of social wholes. Watkins maintains that even if we managed to describe, predict and control social behaviour, we could not claim to understand such behaviour without treating it as a collection of individual responses. Social wholes are not like mechanical wholes that

[75] Smuts, Ibid. p.319.

can be studied by reducing them into their smallest constituent parts. Rather social wholes are organic in nature and are significant only as wholes. Durkheim said "Society is not the mere sum of individuals", but a collective representation with a "collective conscience".

Popper refutes the theory of holism as nothing unique to social sciences and contends that even physical structures can be explained as mere constellation. He believes that there are other forces at play such as what he calls the "conspiracy theory" which is one of the forces that influence social change and can affect the constellation or the concept of holism.[76] That a part cannot be studied and understood independent from the whole is the basic premise of Holism. In essence Holism implies the following four conditions:

1. The whole is more than the sum of its parts.
2. The whole determines the character of its parts.
3. Parts of a whole cannot be studied independent from the whole.
4. Parts of a whole are in a dynamic state and are interrelated and interdependent.[77]

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[76] See Karl Popper, Poverty of Historicism. London: Routledge and Kegan Paul, 1957.

[77] D.C.Phillips, Holistic Thought in Social Sciences. London: The Macmillan Pres Ltd., 1977, p. 6.

Holism as a theory can contribute significantly to the planning process, but needs further development to be more than a peripheral focus of concern. Atomism, in essence, is a belief that justified analytic (Reductionist) rather than holistic methods. Atomism promotes the pursuit of knowledge through the taking apart and then putting together of information on the 'atomistic' assumption that the whole is equal to the sum of its component parts. The Holistic approach rejected this notion, arguing that the whole is more than the sum of its parts, or that the whole must be understood holistically. That it is inherently an organizing and regulating activity and that it is both a directive and creative force of the natural system. The argument goes further in debating whether Holism refers to actual parts or a typical part of a constituent whole, or whether as Popper contends is it "the totality of all the properties or aspects of a thing, and especially of all the relations holding between its constituent parts" or whether it is "certain special properties or aspects of the thing in question, namely those which make it appear an organizing structure, rather than a mere heap".[78] But such a debate only digresses from the central issue - determining the most useful and functional approach to planning problems - whether it be an individualistic or holistic approach.[79] But what is sig-

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[78] Karl R. Popper, The Poverty of Historicism. London: Routledge @ Kegan Paul, 1957, p.76.

[79] G.C. Homans,"Bringing Men Back In", American Sociological Review. 1964, pp. 808-18.

nificant is that Holism presents greater potentials for gaining a synoptic view of society and its purposes.

5.8 SYSTEMS AND PLANNING

Another approach that was formulated to deal with complexities and wholes, is General Systems Theory and the related field of Operations Research. One of the founders of a General Systems Theory was Ludwig von Bertallanfy (1928). The theory was developed from the "organismic biology" and "the systems theory of organism".[80]

The roots of systems theory lie in the "Gestaltian Psychology" which originated in Germany around 1910. The earliest intellectual fervour came from Max Wertheimer, Kurt Koffka and Wolfgang Kohler. The word "Gestalt" means the configuration, pattern or way in which a thing is organized or put together, whereby the organized whole possesses qualities which are different from those of its component parts. The principal belief is that any inquiry should proceed from the whole to its component parts; the whole should be examined in its complexity and the natural parts should be discovered thereafter.

A system, is a control mechanism which modifies or controls the various systems of the input in order to produce a desired output, and since a system is simply a

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[80] See Ludwig von Bertallanfy, General System Theory. New York: George Braziller, 1968.

part of a larger system, it is necessary to understand its component parts in order to understand the whole. In order to study the component parts and the relationships among the parts, it is necessary to use "cybernetics" and "information theory".

The principal law of cybernetics is the "Law of Requisite Variety". The law of Requisite Variety is based on the assumption that analytic rational method is not adequate to deal with organized complexities, nor is it capable of dealing with wholes or systems as concepts in an integrated manner. It also maintains that complex methods are needed to understand complex systems - because such systems have a logic of their own and are characterized by "requisite varieties". This theory also known as Ashby's Law, suggests that only variety can create, absorb or destroy variety - complex systems are therefore needed to deal with complexities. In other words, it is the way in which things behave that needs to be understood and is important in planning. Gestaltism, Systems Theory and Cybernetics, all purport to be based on reality - on the way in which all complex living systems, including humans, behave.

All organisms till now were, perceived in mechanical terms and represented visible mechanical structures. It was based on mechanistic-rational world view. This mechanistic theory was applied to both animals and machines alike. Even the human body was equated to a machine in terms of its

structure and function. But such explanations could only be derived from external properties. The internal components of these living organisms, the cells and life giving properties, were ignored.

By the end of the eighteenth and the beginning of the nineteenth century, the nature of empirical knowledge changed. Distinction was now made between things and beings. The need to understand the phenomena of living organisms, and as a counter to the tendencies of mechanistic models, a new theory emerged called "Vitalism" to explain this mystic force in living beings. This mysterious agent was known by different names, "anima", "intelligence", "plastic nature", but by the end of the eighteenth century it became known as the "vital force", hence the school of Vitalism. The two rival theories that emerged were the theory of Vitalism and the theory of Rationalism.[81]

Vitalism (19th.cent.) was concerned with the systems in terms of their innate properties, and Rationalism (17th.cent.) was concerned with the relationships and connectedness of parts in the system and was akin to the Darwinian mechanistic model. The Vitalists were concerned with the overemphasis and domination of the Rationalistic/Mechanistic model, and attempted to infuse as noted earlier, new thinking into these rigid mathematical and materialistic be-

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[81] See Francois Jacob, The Logic of Life. Trans., B.Spillmann. New York: Pantheon Books, 1973.

liefs. The Vitalist wanted life, the "elan vital" to be the core, the essence, the vital force in the evolutionary processes of growth. They believed that each part of the body possessed something called sentiment, instinct, intuitive perception.

The pioneers of Vitalism were Hans Driesch, whose work on "entelechy" provided the central idea, that evolution occurs as a result of entelechy in very discreet and identifiable steps. Lloyd Morgan (1852-1936), pursuing similar study, termed the process as the "emergent evolution", a force that generates new forms at new and different stages in the evolutionary process. Henri Bergson (1859-1941) termed the process the "creative evolution".[82]

Vitalism, suggests that there is more than physical and chemical forces underlying change in nature - that life in living organisms are caused and sustained by a vital force called "entelechy", that provides it with a creative urge, and a coordinating function in which individual parts are adapted and maintained for the functioning of the whole phenomenon. This entelechy is a kind of life force that by its very nature is both self-evolving and self-determining. It is a kind of creative evolution, whose cause lies within the organisms themselves. This force, they argue, is beyond the bounds of reason and is inherent in all life processes.

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[82] See Henri Bergson, Creative Evolution. Trans., Arthur Mitchell. New York: Modern Library, 1944. (1907).

Patrick Geddes in Cities in Evolution (1915) and Lloyd Morgan in Emergent Evolution (1923), among others were the earliest proponents of this school of thought in the city planning movement. Geddes was perhaps the most influential in relating the city to a living organism. Geddes believed that understanding of the vital force was necessary to understanding and directing society's future. Planning, he argued, was human development towards higher evolutionary goals. This whole movement was, in a way, an attempt at injecting some humanism into hereto for materialistic world philosophy.

Rationalistic or the Mechanistic school of thought as noted earlier, was dominated by the cause-effect model. It postulated the theory that the forces that cause change lie outside the organisms and that they are externally determined. It is this school of thought that influenced planning very strongly, and it is also from this theory that such principles as utility, efficiency and equity evolved and entered city planning discourse.[83]

The introduction of these ideas in city planning came by way of systems theories. General systems theory has much in common with the mechanistic model, it is concerned with cause and effects and it is concerned with the linkages and the relationships between the various parts that make up

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[83] Joe Bailey, Social Theory for Planning. London: Routledge and Kegan Paul, 1975. Ch. 4.

the whole system.[84]

Morris Cohen (1931) defines systems as a complex of elements logically interconnected.[85] Systems, Cohen argues, are also an inherent characteristic of scientific method. Science he maintains, always endeavours to seek ideal rational systems, which is one of the reasons why systems method has appealed to planning. Much literature exits on General Systems Theory and its applications to planning, and of particiular importance are the works of Churchman, Ackoff and Chadwick.[86]

Von Bertalanffy defines a system as a "complex of elements in mutual interaction" and according to R.L. Ackoff it is "any entity, conceptual or physical, which consists of interdependent parts".[87] This recognition of complexity and interdependencies in a dynamic state begins to address some of the concerns that planning has been experiencing. The traditional approach to planning, the scientific method, sought to simplify problems whatever their complexity, and

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[84] N.Wiener, Cybernetics. New York: John Wiley and Sons, 1948, and W.Ross Ashby, An Introduction to Cybernetics. London: University Paperbacks, 1964.

[85] Morris Cohen, Reason and Nature. New York: Harcourt Brace @ Co., 1931. pp.106-114.

[86] See for example, L. von Bertallanfy (1968), C. West Churchman (1968), R. Ackoff (1971), K. Boulding (1956), Y. Dror (1968), G.F.Chadwick (1971), and others.

[87] See R.L.Ackoff. "Systems, Organizations and Interdisciplinary Research" in General Systems Year Book, Vol. 5, 1960.

seek an understanding of cause and effects relationships. Systems approach on the other hand begins with the holistic approach, recognizing the evolutionary nature of the human and natural systems operating in an urban situation. It begins by understanding first, the nature and functioning of the various systems and, second, by examining the means for organizing these systems to seek desired changes. The interdisciplinary and the transdisciplinary nature of the systems approach, adheres well to planning which has for decades been trying to grapple with the inevitable fact that planning by its very nature requires inputs of many disciplines; and, that it also requires a methodology that recognizes and can operate in an interdisciplinary milieu and across relevant disciplines. While increasing use of systems approach in planning is envisaged, the actual effect of such an approach has yet to be determined.

The appeal of systems approach to planning as stated above comes from its interdisciplinary nature, its ability to work across traditional disciplines and its attempts to link and integrate relevant knowledge from various disciplines. Its corpus of knowledge centers on two important premises:

1. Nature as a holistic system.
2. Unity of the nature system.

Its methodology is based on these two principles, meaning it is holistic in its methodological inquiry; it sees interdisciplinary work as most conducive and with greater possibilities for realization; and sees humanism as an important element in scientific inquiry.[88]

General Systems Theory is capable according to its exponents, Bertalanffy and others, of dealing with wholes as manifest complexities and dealing with their relationships. It is basically an explanatory tool multiplicative, rather than additive, and has made a significant contribution in the development of rational models, one of the offshoots of which is Operations Research.

Operations Research, is an activity that attempts to optimize the performance of a system. This is feasible as long as goals are easily identifiable and the means available are quantifiable, at least to the extent that its maxima and minima levels can be a priori determined. Operations Research, is a scientific method that promotes rational justification for most efficient and economical actions. It views organizations for example, as systems that can be subjected to the rules of Operations Research methods such as simulation models and linear programming optimizing models. Operations Research, however, inherits the same limitations as the scientific method in its planning context, as neither

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[88] Erwin Laszlo, ed., The Relevance of General Systems Theory. New York: George Braziller, 1972, pp. 5-7.

the goals nor the means are easily identifiable - much less quantifiable. In turn, the optimizing characteristics of the model are both its strength and its restriction in planning.

Systems planning in general (including both Cybernetics and Operations Research), is a useful methodological tool, but suffers from some inherent contradictions. There is the assumption, for example that social problems can be controlled and managed. Immaterial of the separatedness of the systems designer from the phenomena itself; the designers personal value system does, of necessity, enter the analysis, and thus distorts the real picture.

Systems Planning gains its credibility because it purports to replicate the workings of the real world systems and thus avoids the traps of Atomism. System theory, however, ultimately says very little of human behaviour per se, in dealing with social change, except that human behavioural components are interrelated and exhibit properties different from the sum of its parts.

The introduction of systems analysis in planning occurred mainly because of the felt need to improve the decision-making skills of the executive branch of the government. With Governments assuming increasingly greater reponsibility for economic and social planning and the related implementing and distributing mechanisms, particularly

after World War II, it became necessary to concentrate on the more effective decision-making techniques.

In what came to be known generally as "governmental sciences", systems analysis was first introduced in the Soviet Union and later spread to most of the industrialized nations of the West, in the form of research and development for war productions and military strategies. It became a recognized discipline and branched into such fields as operations research, strategic planning, etc., that eventually found their way into urban planning lingua. Systems analysis thus became an important component of all the planning programs, particularly the use of PPBS (Planning Programming and Budget System). This particular technique of systems analysis was the best known and was developed by the RAND Corporation for the U.S. Dept.of Defense (The Pentagon) and in 1965 on the orders of the President of the United States it was introduced into almost all the executive departments of the Government. The technique attempts to seek ways of producing an output at the least cost in the most efficient way. It seeks to assess all the costs with the output or the utility factor, and it incorporates cost-benefit analysis wherein the costs and the benefits are expressed in monetary terms to provided a comparative assessment.

In sum the appeal of these techniques comes from their technical sophistication and the great efficiency and energy savings they purport to achieve, rather than from any

great or different solutions they can generate. Nurtured by the atomistic and mechanistic beliefs on the one hand, and holistic principles on the other, systems planning is increasingly becoming a very important tool for planning despite its many shortcomings. The danger, however, as Illich warned us is that very often the means becomes the end, we confuse purposes and ends with the technique, or the process by which we do attempt to achieve it. Greater sophistication in the means is no guarantee of greater sophistication of the ends.

Chapter VI

CONCLUSION

> "Ah love! could you and I with Him conspire. To grasp this sorry Scheme of Things entire. Would not We shatter it to bits - and then Re-mould it nearer to the Heart's Desire!"
>
> Rubaiyat of Omar Khayyam.

6.1 A PERSPECTIVE

Man's consciousness transcends scientific laws - his concepts of morality, beauty, truth, happiness go beyond the realm of science, and from the dictum of 'is' to the concepts of 'ought'. But the world-view we hold is based on the scientific model of nature, reason being supreme in the conduct of human affairs. Great men have long advocated the use of experience rather than reason alone as a quide to human actions. We seek men of experience, for example, when confronted with problems that lie outside mundane technical solutions. Yet, in planning we have often adhered to strict scientific dictums even at the cost of ineffectiveness, ignoring common sense, wisdom or insight, inherent in experience.

As planners we always seem to have to reconcile a plural society and a singular reference point. In a plural

society, there is a diversity of sub-cultures found for example in a typical urban community. As planners we have to recognize and deal with conflicts and complexities. We also have to be cognizant of the ethics that govern our actions, and as planners we must recognize freedom and attempt to provide it as best as possible.

The paradox of planning is that it evolved more as a temporary curative rather than as a preventive tool, and more in response to the crisis situations than to any purposeful design. A planner legitimizes his role through a variety of myths and rationalizations. He even invents social goals if needed, for example, to legitimize his intervention and control.

In order to understand the need for a new direction in planning, it is necessary to consider briefly some of the fundamental characteristics of the scientific paradigm, that have hereto permeated planning thought. Three important characteristics stand out: first, the entrenched belief in a harmonious order of the physical, social, political and economic life of a society; second (perhaps a corollary to the first) the adherence to reason as the prime factor in understanding and directing the universe; and the third is the belief that man is universal rather than an individual.

Any planning theory, however, must recognize that these sets of principles, concepts or beliefs are not neces-

sarily historical invariants. It is not only possible but critical that these beliefs or postulates be re-examined and reformulated when it is appropriate to do so.

The unquestioned premises of Galileo, Bacon, Descartes, Leibniz, Newton, and the subsequent positivist philosophers need to be recognized for their limitations.

Planning methods need to be creative and pragmatic rather than merely routine and mechanical. It is not only testing the given hypothesis but the going beyond and seeking other ends, to free experience from routine, and to liberate our thought processes and actions, that, is what is required. Any action directed at a given or fixed end, may allow great technical sophistication and accuracy, but it may also reflect its mechanical character and its inhumanity. What is most perturbing is that the scientific paradigm is not able to accommodate our sense of values and it excludes any feelings. Our ethical experience, appreciation of beauty and truth, and ethos of caring, do not seem to fit. It creates an artificial split between our emotional part of being and intellectual part of acting.

T. Kuhn warned of the limitations of scientific methods and their findings. Stereotyped methods, he said, will generate stereotyped results, and indeed, that a decision to use a certain method assures that certain sorts of

results will ensue.[1]

Science builds methodological and conceptual categories that will reject anything that does not fit into its mould. Such restrictions impose drastic limitations on its use in planning: firstly because planning problems elude scientific definition; secondly planning problems cannot be subjected to scientific measurements and analysis or testing; thirdly, solutions, so arrived at, lack rich, holistic and contextual perspective (they are reductionist) and fourthly, problems and solutions so processed, lack meaning and value to satisfy human needs (that is they do not fit the need system of the user). [2]

The linear nature of scientific methods further exacerbates any planning inquiry. Linear methods argued Watzlawick, generate linear decisions. We are "wedged" says Stafford Beer, in a rigid framework that perceives problems and solutions in a stereotyped fashion, devoid of any new, or fresh, approaches.[3]

At the extreme stands Alan Watts condemnation "...laws and hypothesis of science are not so much discoveries as instruments, like knives, and hammers, for bending

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[1] See T.Kuhn, The Structure of Scientific Revolutions. Chicago: University of Chicago Press, 1962.

[2] See T. Kuhn. op.cit.

[3] See Stafford Beer, Decision and Control. New York: John Wiley & Sons., 1966.

nature to one's will". What is needed, he says, is not simplification and generalizations of nature's rich and varied complexity, for the sake of scientific expedience, but recognition of the very diversity and complexity as a metaphor of nature and to act accordingly.[4]

The general problem in human understanding that we face according to Toulmin is "to draw an epistemic self portrait which is both well-founded and trustworthy; which is effective because its theoretical basis is realistic, and which is realistic because its practical implications are effective."[5] It is the recognition and affirmation of human values rather than their denial. It is also the recognition of unity in diversity, of mutual interrelationship or connectedness, and of the basic oneness of the indivisible realty of the universe.[6] Sartre noted that "Man is nothing else but that which he makes of himself."[7] The potential exists, the purposes are there, the will is manifest, but the guide to our actions still remains to be resolved. Jonathan Swift (1667-1745) believed that man was not inherently an "animal rationale" but was "rationis capax" and as such al-

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[4] Alan Watts, Nature Man and Woman. London: Abacus Publishers, 1976. p. 67.

[5] S.Toulmin, Human Understanding. Vol.I, Oxford: The Claredon Press, 1972, p. 3.

[6] Fritjof Capra, The Tao of Physics. London: Fontana Books, 1975, pp. 133-166.

[7] J.B.Sartre, Existentialism and Humanism. London: Methuen @ Co.n 1970. p. 28.

ways acted rationally and humanly, and that man has not only a mind capable of discovering truth but also a will capable of choosing and doing good.

It will never be possible to gain a complete world picture. What is needed is a synoptic view (viu d'ensemble) and an active commitment to at least a "limited ideal" that Rousseau and others of the age of enlightenment were fostering. The moral question that could quide human action, is the definition of the word "limited". In other words, how much of this limited ideal world picture do we need, to make morally justifiable decisions.[8] We need to understand, what is it that we desire to control or suppress if necessary, and what is it that we need to liberate and free. Planning is not simply a scientific technique of city building - it is an expression of social consciousness.

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[8] Ernest Becker, The Structure of Evil. New York: The Free Press, 1976. p. 362.

GLOSSARY

Advocacy Planning:	Planning in a neutral role expressing the plural interests of a community - planning that presents choices and alternatives and highlights conflicting situations (see Davidoff and Reiner).
AIDA Approach:	(Analysing Inter-connected Decision Areas) A planning method that deals in strategic choices, by reducing uncertainties. (See Wedgwood - Oppenheim).
Algorithmic Method:	A method that seeks to optimize given ends - an incremental process, deals with known class of problems and uses quantitative methods to seek optimal solutions (Contrast with Heuristics).
Allocative Planning:	Planning that involves distributing scarce resources among the various competing demands. (See Friedmann).
Analogy:	An inference depicting semblance between relationships of things rather than between things themselves - appearance of overrall phenomena is similar - superficial (Contrast with Homology).
Analysis:	Resolution of a complex whole into its component parts. (contrast with Synthesis).
Analytic Method:	A logical method that emphasises deductive and inductive inferences - a method wherein truth and falsity can be inferred from the statement itself - aimed at understanding in philosophical inquiries - method using formal reasoning. (Contrast with Scientific Method) (Associated with Descartes)
Anarchist Theory:	A theory of knowledge that subscribes to the principle that "anything goes" - argues against method of science. (see P.K. Feyerabend).

Anthropocentric:	A doctrine that views man as an entity apart and superior to nature - an exclusionist approach. (Contrast with Biocentric).
A Posteriori:	From what comes after - based on experience - empirical. (Contrast with A Priori).
A Priori:	From what comes before - prior to experience - rational. (Contrast with A Posteriori)
Atomism:	A theory of nature that maintains that the universe is made up of individual atomic facts - the basic premise is that the whole is equal to the sum of the individual parts. Maintains that the whole phenomena can be reduced into parts without serious loss of meaning. (Contrast with Holism, Gestalt Concept and Individualism) (see also Reductionism).
Authority:	A right that is explicitly determined within a system to control and bring about desired ends. (Contrast with Power).
Axiology:	A theory of value, aesthetics or ethics - deals with what matters. (Contrast with Epistemology and Ontology).
Axioms:	Propositions that are considered to be true - forms basis for theorems. (Contrast with Theorems).
Biocentric:	A doctrine that views man as part of the nature system - an inclusionist approach. (Contrast with Anthropocentric).
Bivalance:	Principle that states that a proposition can be either true or false, but not both.
Buddhist Economics:	Economics that emphasise quality rather than quantity and existence rather than accretion. (See Schumacher).
Cognitive-Dissonance	A theory that maintains that human

Theory:	organisms try to establish internal consistency harmony or congruity, among its opinions, attitudes, knowledge and values. (see Leon Festinger).
Cognitive Experience	Experience based on intuitive perception, beliefs, common sense, or conjecture.
Common Sense Realism:	A school of thought founded by Thomas Reid (1710-96) which subscribes to the realistic beliefs of the common man.
Common Sense Method:	A descriptive method -deals with things as they relate to man. (Contrast with Empirical Method (See J.F. Lonergan)
Concensus Planning:	Planning that is based on agreed upon opinions or concepts, designed to deliberately avoid conflicts in opinions.
Conflicts:	Issues in which there is disagreement between ideas or parties concerned. (Contrast with Contradictions and Controversies.)
Conflict Theory:	A Theory based on the premise that society exists in constant state of conflicts between differing interest groups - suggests need to resolve conflicts.
Conscience:	Knowledge based on conviction.
Consciousness:	Totality of a person's thoughts and feelings, state of self awareness.
Constructs:	Components that formulate theories.
Constructive Typology:	A format designed to explain and postulate relationships in social phenomena - aimed at representing <u>expected</u> rather than <u>fixed</u> behaviour patterns. (See John C. McKinney.)
Contraries:	Distinguishes between being and non-being, e.g. up-down, bittersweet.

Contradictions: Issues or situations that are incompatible with each other. (Contrast with Conflicts and Controversies.)

Controversies: Issues that are contentious. (Contrast with Conflicts and Contradictions.)

Contingency Planning: Planning that seeks to reduce problems into those with obvious solutions and those whose solutions are more difficult.

Conventions: Dictates of society - accepted norms of the social fabric.

Conventionalism: A doctrine that assumes theories as conventions developed for specific purpose - primarily concerned with truth or falsity and only secondarily with reality. (Contrast with Instrumentalism and Operationalism.)

Conjectures: Opinions based on guess, intuition or feelings. (See Karl Popper.)

Corporate Planning: Planning within the framework of an institutionalized system - a process of decentralized planning among a number of administrative (corporate) officers.

Critical Theory: A theory that maintains that planning should be directed towards the critical examination of society, in order to achieve desired social changes. That our ideas eminate from the environment in which we live and reason being supreme in the decision making process. (Associated with Frankfurt School).

Critique: Art of informed judgement - essentially an activity of reason.

Cybernetics: Science of communication and control in man and machines - deals with closed systems in information exchange with the environment. (See N. Wiener.)

Decision Process:	A process wherein alternatives are evaluated to select one that will achieve the end objective.
Deductive Method:	A method of reasoning in which a particular inference is derived or deduced from a general statement. (Contrast with Inductive Method.)
Deliberative Rationality:	Rationality that is based on a reasonable belief in a course of action to achieve desired ends - it may pursue objective or subjective rational plan. (See Sidgwick and Rawls).
Delphi Technique:	A decision making technique that uses questionnaires to assist decisions. The underlying assumption is that a best decision lies in the collective wisdom of a number of experts - its special feature is its annonimity and feedback possibility.
Determinism:	A doctrine that maintains that all the past and future events can be precisely determined. (Contrast with Indeterminism.)
Development:	Change in the fabric of society structural change (contrast with Growth and Planning).
Dialectic:	A method of discourse - a means of investigation using logical disputations.
Dialectic Method:	A method that effects a synthesis or unity of opposites, as manifested in the real processes of nature and society.
Distributive Justice:	Concerned with distributing among its members both the benefits and the costs accruing to a community. (See John Rawls.)
DOSRAP Technique:	A technique designed to generate deliberate administrative action - it is simultaneous, deliberate, staged, recursive and administrative techniques (see Ruth Mack).

Elitist Planning Model: A model that imposes, the values and perferences of a small governing elite group, as public policy.

Empirical Science: Pursuit of knowledge based on empirically observed data or experience-a posteriori. (Contrast with Rational Science).

Empiricism: A philosophy that mantains that knowledge of the world can only be gained through sense-experience. (Contrast with Rationalism.)

Empirical Method: An explanatory method - deals with things as they relate to each other - based on sense-experience and experimentation. (Contrast with Common Sense Method) (See J. F. Lonergan).

Entropy: Measure of disorder, a state wherein neither the central purpose nor the end state of society can be clearly identified.

Epistemology: A theory of science and method of knowledge for solving problems - perceives the nature of change. Deals with what can be known and how it can be known. (Contrast with Axiology and Ontology).

Ethic: Moral issues and value precepts - conduct that mediates human living - study that seeks to distinguish the good and the bad - conformity to a code (See Morals).

Ethology: Study of the innate behaviour patterns in animals. (See Konrad Lorenz and Niko Tinbergen).

Evaluative Process: A process of establishing value frame to assess the various courses of action to seek desired ends.

Existentialism: A philosophy that believes in human freedom to make choices and in responsibilities for its consequences - human nature is what we believe it to be - believes in the irrationality of natural phenomena - trapped in existence. (See Heidegger and Sartre).

Facts:	Proven observations.
Freedom From:	Implies immunity from restrictions in pursuing one's wishes. (Contrast with Freedom To.)
Freedom:	Absence of constraints.
Freedom To:	Implies liberty to pursue one's wishes. (Contrast with Freedom From).
Freedom of Choice:	Pursuit of self interest.
Functional Theories:	(See Theories of Planning).
Geotechnic:	The art and science of making the earth more habitable. (See Geddes).
Gestaltian Psychology:	A school in psychology that deals in configurations and structures of perceptions - emphasises holism against atomism - basic doctrine is that the whole is more than the sum of its parts. (See Wertheimer).
Goals:	Desired end state/ideals-normative directions rather than end state - the 'ought'. (Contrast with Objectives).
Goal Programming:	A linear programming model designed to optimize utility function or attainment of goals within set environmental contraints. (See A Charnes and W. W. Cooper).
Godel's Proof:	States that every logical system must contain a premise which is not definable without contradicting itself.
Group Model Planning:	Planning through a process of interaction among groups, by seeking consensus.
Growth:	Multiplicative change of the same phenomena (Contrast with Development).
Heisenbergs Uncertainty Principle:	A principle that mantains that it is impossible to achieve objectivity and perfect accuracy in scien-

	tific inquiry - nothing is fully deterministic.
Hermeneutics:	The art of interpretation aimed at understanding the essential meaning of human actions - attempts at understanding the parts in terms of the whole. (Associated with Frankfurt School).
Heuristics:	A Process of self discovery aimed at seeking approximate or satisfactory solutions based on trade-offs and not necessarily optimum solutions - method of discovering as against proving - it is means oriented, rather than directed, uses open ended procedure and deals with fuzzy kinds of problems. (Contrast with Algorithmic)
Historicism:	A belief that suggests that in order to gain adequate understanding of the nature of things, it is important to understand its development in historical perpective - understanding an event in its larger historical context. (see Popper).
Holism:	A process of organic (creative) synthesis as a whole - study of functional relationships of a system as a whole - evolving wholes - based on the principle that the whole is more than the sum of its parts - based on the assumption that the whole phenomena cannot be reduced into parts without serious loss of meaning. (Contrast with Atomism and Reductionism).
Humanism:	A mode of thought or action in which human interests predominate.
Hypothesis:	A provisional proposal stating that two or more things are causally related - a tentative construct - supposition made as a basis of reasoning without assumption of its truth. (Contrast with Theory and Law)
Hypothetico-Deductive	A method in which the initial major

Method: hypothesis is assumed to be hypothetical, conclusions are deduced from it and tested against experience - if false it is rejected - helps confirm hypothesis but not to formulate it. (First formulated by Leibniz) (Contrast with Inductive-Deductive Method).(See Popper).

Ideology: A system of ideas defined in context of its role in society - a belief characteristic of an individual, group or culture.

Ideographic Analysis: Analysis of characteristics that are unique. (Contrast with Nomothetic Analysis) (See Alfred Kuhn)

Incremental Planning: Planning for incremental modifications of past policies - continuation by small increments.

Inductive Method: A method of reasoning by which an inference is derived from a particular premise to a universal general statement. (Contrast with Deductive Method).

Inference: A cognitive activity specific to each individual.

Indeterminism: A doctrine that maintains that not all the events in the world can be determined with absolute accuracy. (Contrast with Determinism and Heisenbergs Uncertainty Principle).

Innovative Planning: Planning by means of structural changes in the institutional system that guide society.

Instrumentalism: A doctrine that maintains that scientific theories are only instruments in predicting observable phenomena - judged on the basis of their usefulness rather than if true or false. (Contrast with Conventionalism and Operationalism). (See Dewey).

Intuition: Akin to common-sense - without use of systematic reasoning - developd from immediate insights or apprehensions. (Contrast with Reason).

Intuitive Knowledge:	Knowledge which is non-conceptual, but not non-rational.
Intuitionism:	A theory of knowledge based on intuition - apprehension or insight rather than reason.
Irrational:	Knowledge acquired by faculty of mind other than reason - differs from non-rational. (Contrast with Rational).
Laplacean Strategy:	Strategy that seeks to maximize the average of utility rather than the total of utility - a belief that maintains that if one has complete knowledge of all the facts one can predict all the future events.
Law:	A statement of fact based on best available knowledge. Social control legislated by government. (Contrast with Theory and Hypothesis).
Law of Requisite Variety:	Maintains that only variety can create or destroy variety - complex solutions are needed to deal with complex systems. (See Ashby).
Legal Positivism:	A doctrine that maintains that the principle and rules of human conduct can be determined by use of reason alone. (See John Austin and J. Bentham).
Legal Reasoning:	Reasoning based on established laws and precedents.
Logic:	A science of laws of thought - method of reasoning - used primarily for proving or confirming, but not for discovering - a theory of inference - deals in the way in which statements are constructed or make sense - dictates the rules of rationality.
Method of Science:	See Scientism.
Matrix Method:	A method designed to be both open-ended and systematic - sees urban systems as organic wholes and interrelated - does not pretend to be either quantifiable nor exhaustive.

Maximization:	A process of achieving the highest possible state - not necessarily the best. (Contrast with Optimization).
Methodology:	Principles and techniques that guide an inquiry - organizes changes.
Model:	A structured/formal representation of our understanding.
Morals:	Habits of life, modes of conduct, accepted customs, study dealing in principles of conduct, relating to the principles of consideration of right and wrong. (See Ethics).
Morality:	Set of rules that seeks the greatest happiness for all.
Naturalism:	An ethical philosophy that maintains that the criterion for right action is derived from the natural laws and the empirical features of the natural environment.
Natural Laws:	Physical laws that are incapable of breach. (Contrast with Normative Laws). (See G. E. G. Catlin).
Noetic Planning:	Planning by perceiving changes - creating new awareness on a lateral and collegial level rather than on the traditional hierarchial structure - educating for planning to seek new ways to choose within a holistic and systemic frame. (See James D. Carroll and Lionel J. Livesey).
Nominal Definitions:	Defining meaning of a term - an arbitrary meaning assigned to a word for purposes of explicating the intent regardless of is common usage - use of new terms or symbols as an abstraction of a complex expression - defines the meaning of the term itself - an abbreviational definition. (Contrast with Real Definitions).

Nomothetic Analysis:	Analysis of characteristics that are common among different phenomena. (Contrast with Ideographic Analysis). (See Alfred Kuhn)
Normative Laws:	Laws made by man and enforced by sanctions. (Contrast with Natural Law). (See G.E.C. Catlin)
Normative Theory:	A theory that deals in abstract entities - a prescriptive and evaluative concept dealing in values and aspects of 'ought'. (Contrast with Procedural Theory) (See Theories in Planning).
Objectives:	Desired end state - short range - the 'is'. (Contrast with Goals).
Objectivity:	Devoid of conscious inputs - external to the mind,neutral - associated with reality. (Contrast with Subjectivity).
Ontology:	A theory of knowledge based on a prior demonstration of existence - study of being - deals with what exists. (Contrast with Axiology and Epistemology).
Operations Research:	An activity that seeks to optimize the performance of a system.
Operationalism:	A theory of knowledge that assumes that a theory is meaningless outside the context of its application - concerned with meaning and reality. (Contrast with Conventionalism and Instrumentalism).
Optimization:	A process of achieving the best desirable state. (Contrast with Maximization).
Organizational Theories:	Theories that concern the organization and management of institutions that are involved in planning, emphasis being on behaviour, values, awareness and transformation of perception - goal oriented and innovative in nature.
Paradigm:	A scientific model presenting practical solution - accepted theory. A system of belief. (See T.Kuhn).

Pareto Optimality: A theory that maintains that an individual cannot maximize his utility function without minimizing someone else's.

Phenomenology: A philosophy that attempts to describe phenomena by means of direct awareness - it is descriptive and is concerned with getting to the "things themselves" - experiencing. (See Husserl).

Philosophy: Intellectual activity in pursuit of knowledge, aims at understanding phenomena in nature using the logic of rationality. (Contrast with Science).

Planning Balance Sheet: An accounting system designed to generate better informed rational decisions - provides the summary advantage and disadvantages of various proposed projects. (See N. Lichfield).

Planning Science: Planning within the dictums of science - putting the whole of planning activity in the domain of science and rejecting those that do not conform to the scientific dictums - making science of planning. (Contrast with Scientific Planning).

Planning: Planning in this thesis implies town and country planning - an activity that seeks to organize and direct changes towards desired ends - it is selective, conscious and deliberate activity - it is also construed to be an activity that seeks to ameliorate any negative forces that preclude desired changes. (Contrast with Development - See Geotechnic).

Procedural Theories: Theories dealing in the <u>is</u> aspects, methodology and means oriented, empirical/functional (Contrast with Normative Theories - See Theories of Planning).

Positivism: A doctrine that asserts the positive science - empirical science as the only form of human knowledge - rejects methaphysical claims - representation of facts devoid of values. (Associated with Vienna Circle).

Positive Theory: (See Theories of planning).

Power: Ability to control and achieve desired ends. (Contrast with Authority).

Pragmatics: Study of relationship between the signs and their users. (See Semiotics).

Pragmatism: A philosophy based on concrete experience of the reality - pertaining to factual, realistic - a doctrine that maintains that a theory is right if it is useful - replaces the concept of truth with value. (Associated with William James and John Dewey).

Praxis: A philosophy of action - a theory of practice.

Rational Science: Pursuit of knowledge through logical deduction. Starts with principle accepted as self evident. (Contrast with Empirical Science).

Rational: Argument based on reason - explicitly reasoned. (Contrast with Irrational)

Rationalism: A philosophy that maintains that knowledge can only be gained through the use of pure reasoning without appeal to any empirical premises - deductive rather than sensory. (Contrast with Empiricism).

Rationality: Systematic use of reason - conscious use of reason. (Contrast with Intuition)

Real Definitions: Defines the term itself - definitions with a fixed meaning - not subject to change - an equating

definition. (Contrast with Nominal Definitions) (See Antoine Arnauld)

Reason: "Faculty of mind informed by Grace" - justification - sensible or adequate conduct.

Reasoning: Thinking in logical form - connecting ideas in a systematic way - drawing inferences by use of pure reason - ordering concepts according to the rules of logic.

Reductionism: A process of reducing by extracting common factors and rejecting others - method used in scientific inquiry. Based on the assumption that a whole phenomena can be reduced into parts without loss of meaning (see also Atomism).

Residual Problem Reasoning: Defining problems in terms of what they are not, rather than what they are.

Rule-Guided Reasoning: Or the Logic of Choice - a method of reasoning alternative to the scientific and analytic method - reasoning according to the societal rules. (See Gidon Gottlieb).

Satisficing: State of reaching adequate level of achievement.

Science: Knowledge based on proven theory - aims at explaining - is not truth, but pursuit of truth. (Contrast with Philosophy).

Scientific Planning: Scientific doctrines and methods used in planning to achieve an end. (Contrast with Planning Sciences).

Scientism: Addiction to the scientific theories and methods.

Scientific Method: Systematic application of reason to empirical data, using techniques of experimentation and measurement - a method based on observation, measurement and verification used in scientific enquiries - aimed at explaining phenomena - empirical - deals with those aspects that are

	regular and reliable. (Contrast with Analytic Method). (Associated with Francis Bacon).
Semantics:	Study of the relationship between signs and things they designate - science of meaning. (See Semiotics).
Semiotics:	Study of signs in human communication system - divided into three parts: Semantics, Syntactics and Pragmatics.
Semiology:	Science concerned with signs of communication in a society. (See F. Saussure).
Sociobiology:	A school of thought that believes that social behaviour is genetically determined - biologically determined theory of culture. (See E.O.Wilson).
Sociogenesis:	Social learning process/ cognitive learning theories emphasizes mutual learning to respond to the environment and cognitions such as values, feelings etc.
Strategic Decision:	Decision in which the influencing factors are under control of more than one operator and the decisions affect the area outside its control. (Contrast with Tactical Decision).
Strategic Planning:	Planning that seeks to identify objectives and the resources needed to achieve them and the policies that are required to determine the acquisition and disposition of the resources - emphasises flexibility and recognition of uncertainities - managing uncertainties - (See Friend and Jessop).
Structuralism:	Study of deep structures and form that cannot be directly perceived by our senses. It emphasises form over content. (See Levi-Strauss).
Structure:	A pattern described in terms of its component parts or sub-systems.

Structure Planning:	Planning within the framework of social, economic and physical structure of an area, consonant with the regional and national policies - activity oriented.
Subjectivity:	Associated with perception and consciousness. (Contrast with Objectivity).
Symbiosis:	A process of gaining permanent integration between two or more interdependent organisms or entities.
Syntactics (Syntax):	Study of inter-relationships between signs. (See Semiotics).
Synthesis:	Construction of a whole out of its component parts. (Contrast with Analysis).
Systems:	A set of inter-related parts called components - structures consisting of interdependent parts.
Systems Approach:	A method whose base premise is that the study of the whole system of society and the environment can provide the necessary information to guide planning. Seeks to resolve problems rationaly, optimally and efficiently.
Tautology:	An inference wherein the conclusion states the same things as the premise - literally saying the same thing - akin to deductive inference.
Technical Decisions:	Decisions arrived at based on full knowledge and complete control of all the relevant facts - all those outside are considered to be fixed and not affected by the decision made. (Contrast with Strategic Decision).
Teleology:	A theory that maintains that change takes place for a set purpose - purposeful change - associates the individual behaviour with the purposes of the universe as a whole.

Theory: Abstraction of perceived reality - a hypothesis that has been empirically tested - a partially validated hypothesis - a body of knowledge - supposition explaining phenomena - exposition of a principle of science. (Contrast with Hypothesis and Law).

Theorems: Propositions or facts derived through the process of reasoning - deduced axioms. (Contrast with Axioms).

Theories in Planning: Theories that are prescriptive in nature, normative/substantive theories - deals in the "ought" aspects - goals and values oriented - end state. (Same as Normative Theory - See Faludi, Hightower & Friedmann).

Theories of Planning: Theories that are descriptive in nature, - deals in the "is" aspects - theories of techniques, methods oriented - objective, empirical and predictive in nature. (Same as Procedural, Functional or Positive Theories - See Faludi, Hightower and Friedmann).

Transactive Planning: A planning style that employes the mode of mutual learning as an evolutionary process. Translating knowledge into action. (See Dunn & Friedmann).

Typology: A set of interdependent classification of categories used to define a phenomena - a device for ordering concrete phenomena.

Utilitarianism: A school of thought that believes that one should pursue the greatest good or the greatest happiness of the greatest number as the end objective of society. (See J. Bentham and J.S. Mill).

Value: Ordering of preferences - morally based inference. (Contrast with Facts).

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